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5 June 1994

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To Whom It May Concern:

Enclosed are two copies of my completed dissertation titled: Effectiveness of the Physical Education Curriculum at the United States Military Academy in Preparing its Women Graduates. The signed approval page is also enclosed. If additional information is needed please contact me at the Department of Physical Education at the United States Military Academy.

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MAUREEN KEENAN LEBOEUF
Effectiveness of the Physical Education Curriculum at the United States Military Academy in Preparing its Women Graduates.
(Under the direction of ANN E. JEWETT)

Understanding the participant perspective of a program is important in order to determine if the curriculum is in fact achieving the desired outcomes. The purpose of the study was to examine the effectiveness of the physical education curriculum of the United States Military Academy in the preparation of its women graduates for their role as Army officers and leaders. This study focused on the perceptions of women graduates concerning the physical education curriculum and related experiences. To provide a context for this study an extensive review of the literature centered around the changes which have been implemented at the United States Military Academy within the Department of Physical Education since the arrival of women in 1976.

Participants were 181 women graduates of the United States Military Academy from the classes of 1980, 1985, and 1990. Data were collected using a survey questionnaire which centered around the operational definition of effectiveness. In this study effectiveness was defined as an evaluation of the extent to which the individual participant derived satisfaction from the physical education program, acquired fitness knowledge and skills, adopted a pattern of regular participation in fitness activities, and ultimately, observed a beneficial impact on

the unit to which the individual is assigned. Follow-up telephone interviews were conducted with 13 women graduates in an attempt to probe for additional information in areas identified during the data analysis.

Content analysis was used to determine the categories which were most prevalent in the data. The categories which emerged for the classes include: increased self-confidence, hard work and discipline; excelling physically; credibility; being a role model; benefits of fitness; teaching; and increased self-esteem.

It was determined that few changes have been made in the physical education curriculum since the admission of women in 1976. Additionally, the women have continued to meet and exceed the physical challenge presented; their upper limits have yet to be determined. In general, it was concluded that the physical education curriculum is an effective component of the United States Military Academy's preparation of its women graduates to assume their role as Army officers and leaders.

INDEX WORDS: Curriculum Evaluation, Physical Education Effectiveness, Impact Study, Participant Perception, United States Military Academy, United States Army Physical Fitness, Women in the Military, West Point Curriculum

# EFFECTIVENESS OF THE PHYSICAL EDUCATION CURRICULUM AT THE UNITED STATES MILITARY ACADEMY IN PREPARING ITS WOMEN GRADUATES

by

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M.Ed., The University of Georgia, 1986

A Dissertation Submitted to the Graduate Faculty of The University of Georgia in Partial Fulfillment of the Requirements for the Degree

DOCTOR OF EDUCATION

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1994

EFFECTIVENESS OF THE PHYSICAL EDUCATION CURRICULUM AT THE UNITED STATES MILITARY ACADEMY IN PREPARING ITS WOMEN GRADUATES

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Approved:

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Major Professor

May 19, 1994
Date

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Gordhan L. Patel
Dean of the Graduate School

May 19, 1994
Date

## DEDICATION

This research is dedicated to my family, far and near. To my parents, Leo E. Keenan, Jr. and Ann Finlay Keenan, dedicated educators, who taught me at an early age the value of an education. They also taught me that being a girl should not make a difference. Their love, prayers and words of encouragement meant more than they will ever know;

To my eight brothers and sisters and their families whose phone calls, cards and letters served as a constant source of support and motivation. A special thanks to Dee Dee who always made me laugh and to my special angel for all of the prayers she sent in my direction;

To Jay and Jackie my children, the sunshine in my life. They have had to deal with my pursuit of a doctorate first hand; evening classes, missed meals, and distractions on my part. The hugs, kisses and unconditional love of these two small people remind me on a daily basis what is truly important in life;

To Joe, my husband, friend and partner in life, who listened, challenged and reassured me. He stood by me and supported me daily during this process; which at times seemed somewhat akin to a wild roller coaster ride.

So, it is to my family that this work is dedicated, because I could never have done it alone.

Yes Joe, we did make the right choice!

## ACKNOWLEDGEMENTS

There are many people who assisted both directly and indirectly in the accomplishment of my work, to whom I must express my appreciation. First, my deepest gratitude must be offered to Dr. Ann E. Jewett, my major professor who started all of this by writing a letter of recommendation. She remained my advisor even after two years into her retirement. Her dedication and mentorship will always serve as a source of inspiration;

To my committee members Drs. Martie Washington, Marie Mullan, Margaret Holt, Genelle Morain, and Mary Lou Remley, whose guidance, advice and the time they gave to my work means a great deal to me;

To the women graduates of the United States Military Academy from the classes of 1980, 1985, and 1990 who participated in this study. Their timeliness and candid responses resulted in a treasure lode of data;

To my fellow graduate students who have tolerated me through this process. Especially Pamela Dunston and Kathleen Szuminski who listened patiently as I talked about my data and continued to keep in touch;

To my typist, Donna Sanders, who was always patient and responsive. Through her technical expertise she helped me produce a wonderfully professional document;

Finally, to my fellow researchers in the Curriculum and Instruction Lab, thanks for putting up with a soldier!

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# Chapter 1

## INTRODUCTION

> . . . having been appointed an officer in the United States Army, I do solemnly swear (or affirm) that I will support and defend the Constitution of the United States against all enemies, foreign and domestic, that I will bear true faith and allegiance to the same; that I take this obligation freely, without any mental reservation or purpose of evasion; and that I will well and faithfully discharge the duties of the office upon which I am about to enter; so help me God (DA Form 71, 1 August 1959).

The oath of office is taken each May by all graduating cadets at the United States Military Academy (USMA) located along the picturesque Hudson River in West Point, New York. The oath of office marks the end of a cadet's four year West Point experience. During those four years a cadet is transformed into a leader who will serve the nation as an officer in the United States Army.

Like many four year colleges and universities West Point has a curriculum that is challenging, both intellectually and physically. However,

> The United States Military Academy as the only college specifically charged with preparing young men and women for service as officers in the United States Army, has a singular educational philosophy. Graduates must be enlightened military leaders of strong moral courage whose minds are creative, critical and resourceful. The total academic and military curriculum helps develop these qualities (USMA, 1986/87, p. 38).

It is important to understand the purpose and mission of West Point. The purpose is: "To provide the nation with leaders of character who serve the common defense" (USMA, 1988, p. 1). The mission of the United States Military Academy is: "To educate and train the Corps of Cadets so that each graduate shall have the attributes essential to professional growth as an officer of the Regular Army, and to inspire each to a lifetime of service to the nation" (p. 2).

In the year 2002, the United States Military Academy will celebrate its 200th year as an academic institution. West Point is well known for many of the great military leaders it has produced; Eisenhower, Lee, MacArthur, Grant, and Schwartzkopf are but a few. Missing from these names are those of women. Women were not admitted into USMA prior to 1976; the resistance was probably because many believed women did not have the abilities needed to become West Point graduates. There was probably concern that if

women were admitted the standards would be lowered and the quality of the curriculum diminished. The mission of USMA had not changed; however, in 1975 Public Law 94-106 was signed, requiring that women be admitted. In July 1976 the first women entered USMA as members of the class of 1980.

The total curriculum at USMA has three major facets: academic development, military development, and physical development. The overall concept for physical development at the Military Academy is:

> Physical development provides leaders with physical skills, self-confidence, the warrior spirit, and a commitment to maintain their own physical fitness and that of their soldiers. Physical development encompasses both physical education and athletic programs. Emphasis is on the physical and mental aspects of fitness, teamwork, perseverance, and the will to win (USMA, 1988, p. 8).

The Department of Physical Education accepts a major responsibility for physical development. The department further defines the concept of physical development:

> Fulfillment of the physical development concept at the United States Military Academy is realized through a four-year integrated program directed toward solidifying the foundations of physical education, developing sports skills, and providing leadership training opportunities; a

concomitant four-year physical fitness development and evaluation program; and a multi-level athletic program (USMA, 1984).

The focus of this dissertation was on physical development, specifically, the physical education and training of women cadets during their four years at the Military Academy. Answers were sought to such questions as: Did the curriculum achieve the intended outcomes? Did the women cadets receive the requisite information and skills deemed necessary to function as leaders in the United States Army? Have these women graduates remained physically active?

The answers to these questions are important for several reasons. First, USMA must prepare its graduates to meet the needs of the Army. If these needs are not met, then it is important to identify specific deficiencies and initiate the required changes.

Second, in times of budget cuts, it is even more important that tax dollars be well spent. In February 1993, the service secretaries were informed by Defense Secretary Les Aspin that they would need to reduce spending in 1994 by eleven billion dollars; the Army's proportion of the cut was set at two and a half billion dollars (Matthews, 1993). The drastic spending cut no doubt could be anticipated to find its way to the Military Academy, possibly as a reduction in the number of cadets commissioned each year. When there are fewer West Point

graduates, then it is essential that they receive the very best training.

Third, answering these questions may provide to others useful information concerning approaches to developing fitness and long-term active lifestyles and methods of curriculum development and curriculum evaluation. While other colleges and universities do not have the same mission as the Military Academy, some share similar goals for a physical education program that encourages graduates to engage in life-long physical activity.

## Significance of the Study

In conducting this research, the physical education curriculum at the United States Military Academy was viewed through the lens of the graduates, not that of the developers and implementors of the curriculum, nor from cadets currently immersed in the curriculum. This different focus was selected in order to provide a participant perspective of the Department of Physical Education (DPE) curriculum at USMA. The simple fact that these individuals are separated from the institution by both time and space allowed for reflection and considered judgements. More important, it permitted them to evaluate the curriculum in the context of their actual active duty assignments and their personal satisfaction with current job performance.

This research has both immediate and long range implications. An immediate application of the findings is in the improvement of the DPE curriculum at the United States Military Academy. Improving the curriculum to make it the very best that it can be is the ultimate goal. Improvements made in the physical education curriculum today will ultimately have a positive impact on the Army in the future. The major long range implication is providing the Army with officers who are even better educated and trained in the physical fitness areas than they are today.

This research also can contribute in an even broader educational context. The United States Military Academy has a solid reputation in the higher education community. Additionally, it has one of the most, if not the most, comprehensive four year college physical education programs in the United States. The method of curriculum inquiry and analysis used for this study could be modified and adapted to evaluate the physical education curriculum in other institutions of higher education.

## Purpose of the Study

The purpose of this research was to examine the effectiveness of the physical education curriculum of the United States Military Academy in the preparation of women graduates for their role as Army officers and leaders.

## Research Questions

1. What major changes have occurred in the curriculum within the Department of Physical Education as a result of the admission of women in 1976?

2. What are the perceptions of the women graduates in the classes of 198 , 1985, and 1990 concerning the physical education curriculum and the related experiences encountered in preparation for their role as Army officers and leaders?

## Basic Assumptions

1. The Army officers recruited to judge the questionnaire for content validity were competent and knowledgeable.

2. The respondents to the questionnaire were truthful in their answers.

3. Every effort is made at USMA to abide by the spirit of PL 94-106.

4. The curriculum is in a continuous state of evaluation, and the revisions made are based on judgements concerning the future needs of the Army.

## Delimitations

The questionnaire was developed by the researcher and reviewed by male and female Army officers. Data were collected through distribution to 271 women officers who

graduated from the United States Military Academy in 1980, 1985, and 1990.

The data in this study of the physical education curriculum at USMA reflected the time frame of 1976-1993.

## Limitations

The findings of the study were limited in the following ways:

1. The validity of the questionnaire was limited by its nature as a self-report instrument.

2. The women officers in this study represent only three of the fourteen classes (1980-1993) at the United States Military Academy that have included women graduates.

## Definition of Terms

**Army Physical Fitness Test (APFT)** - A three event test composed of running two miles, sit-ups and push-ups. The APFT is required of all Army personnel twice a year.

**Cadets** - The term for students at the Military Academy.

**Fourth Class Cadets** - Cadets in their first year, freshmen, also called Plebes.

**Third Class Cadets** - Cadets in their second year, sophomores.

**Second Class Cadets** - Cadets in their third year, juniors.

**First Class Cadets** - Cadets in their fourth year, seniors.

**Cadet Basic Training (CBT)** - Training which the new incoming cadets receive the first summer they arrive.

**Indoor Obstacle Course Test (IOCT)** - A timed, grueling physical fitness test given once a year to all cadets. It is composed of running through tires, a low-crawl under bars, vaulting over a horse, climbing onto a platform, dismounting from the platform, threading feet first through a tire, running across three balance beams, a forward roll off of the last balance beam, scaling a wall, hand over hand on an overhead ladder, rope climb, and run around an indoor track three times.

**Mule Rider** - The person who rides a mule, the Army mascot at sporting events.

**Physical Aptitude Examination (PAE)** - A test given to all applicants for admission to any of the military academies (Army, Navy, Air Force). The test is composed of a shuttle run, basketball throw, pull-ups (men), arm hang (women).

**Primary Staff Officer** - An officer who is responsible for a staff section.

**Rabble Rouser** - a cheerleader at the United States Military Academy.

# Chapter 2

# REVIEW OF THE LITERATURE

## Introduction

The purpose of this research was to examine the effectiveness of the physical education curriculum of the United States Military Academy (USMA) in the preparation of women graduates for their role as Army officers and leaders. There were two bodies of relevant literature which were chosen for review. The first area describes and clarifies the nature of the curriculum being evaluated and the military, educational, and social context in which it was experienced by female cadets. The second area was selected literature on curriculum evaluation which ultimately determined the research approach.

A discussion about the structure of military education and training for officers and enlisted soldiers is presented. Additionally, the role and importance of fitness in the United States Army is discussed.

The women in the military section addresses their roles historically from the Civil War to the Gulf War. The numbers of women serving in the Army from 1942 to 1992 are graphically illustrated and descriptions of the capacity in

which they served during Operation Desert Storm are presented.

Research question one asked: What major changes have occurred in the curriculum within the Department of Physical Education as a result of the admission of women in 1976? An historical overview of the USMA physical education curriculum provides the framework for the overall program and how it has developed over the years, with emphasis on the period beginning when women entered the Military Academy. Additionally, aims, goals and objectives of the physical education program are reviewed in relation to how they fit into the total West Point experience. The four year physical education curriculum is displayed to provide understanding of the whole program, including required courses, elective courses, lifetime sports, intramural sports, club sports, and corps squad athletics. The Department of Physical Education testing program was also included.

This leads to a discussion about the women cadets at the United States Military Academy and their physical performance since their arrival in 1976. Comparisons of various test scores from the classes of 1980, 1985, and 1990 are presented.

The evaluation aspect focuses on the purpose of evaluation, the types of evaluation in curriculum, approaches to evaluation review of studies directed toward evaluation of selected physical education curricula, and

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The precommissioning programs are conducted prior to an officer taking the oath of office and officially becoming an officer. They are operated by the United States Military Academy (USMA), the Reserve Officer Training Corps program (ROTC), and Officer Candidate School (OCS). The mission of these three programs is to provide the Army with a certain number of second lieutenants each year.

The entry level schooling is more commonly referred to as the officer basic branch course. The officers attend a course that is branch specific (infantry, artillery, engineers, aviation, armor, signal, etc.). The training tends to be performance oriented with a unit environment utilizing peer and small group instruction. Additionally, training is provided for branch identified critical task skills and management skills required to perform in the specific branch.

The professional level category is divided into three levels: advanced training, staff college, and war college (Forsythe, 1992). The advanced training course again is branch specific and trains senior first lieutenants and junior captains for their upcoming role as company commanders. The Combined Arms Service Staff School (CAS3) at Ft. Leavenworth, Kansas is a three month course which trains young company grade officers (lieutenants and captains) on the role of a staff officer.

The staff college level is officially known as Command and General Staff College (CGSC). This ten month course is

located at Ft. Leavenworth, Kansas and is specifically designed for selected field grade officers (majors). Approximately 25% of the officers from each year group are selected for this course. CGSC prepares mid-grade officers to assume positions at higher staff level assignments. The Army's highest level of schooling is the Army War College located in Carlisle, Pennsylvania. The officers who attend this school are selected from among the Army's senior officers (lieutenant colonels and colonels). The purpose of the War College is to educate senior officers for joint staff assignments with the Air Force and Navy and for senior leadership positions within the Army.

As a result of the decreased threat in the 1980s and early 1990s the United States faced from the former WARSAW Pact countries, the U.S. Army is underwent a formidable reduction in the size of its force. A consequence of this reduction is that the Army was to become smaller in size than it had been at any time in recent history. The outcome of the drastic drawdown of U.S. forces was a higher concentration of soldiers within the continental United States. The result was that the U.S. forces had to be better prepared for rapid deployment around the world.

As mentioned previously, each year the Army receives its new second lieutenants from three primary pre-commissioning sources: the Reserve Officer Training Corps program (ROTC), Officer Candidate School (OCS) and the

United States Military Academy (USMA). This study will focus on officers who are accessed into the Army from USMA.

## Fitness in the United States Army

**The more you sweat in peace,
the less you bleed in battle.**

**Chinese Proverb**

"It is the responsibility of Commanders to stimulate and guide specially identified programs of physical training which will develop and maintain continuously a high degree of physical ability among all military personnel within their units" (Department of the Army Training Circular No. 21-1, March 1963). The increased awareness of fitness and its health benefits in the United States in the early 1980s was not new to the soldiers in the United States Army. The quote above was extracted from an Army training circular which was written over three decades ago. Also listed in that training manual were other areas of concern which related to fitness. Included were: physical training, physical conditioning, weight control, and Army sports programs. The senior leaders in the Army have long been aware of the importance of physical conditioning in preparing soldiers to better withstand the rigors of combat.

In 1981, the United States Department of Defense issued an order to the Army, Air Force and Navy to increase the emphasis on their physical training programs (Athletic

Business, 1984, p. 28). In response to the directive, the Army established the Soldier Physical Fitness School at Fort Benjamin Harrison in Indiana in 1982. In the early 1990s the Fitness Center relocated to Fort Benning, Georgia. The school has a three pronged mission which includes the training of Master Fitness Trainers, physical activity specialists, and mobile training teams.

The Master Fitness Trainers undergo a four week course in which they learn about the human body, exercise methods, and physical training techniques. Once they have completed the course they return to their units where they can provide assistance to the commander on the physical training program. Physical activity specialists are trained in fitness and recreation programs and work at fixed facilities such as the post gymnasiums and swimming pools. The mobile training teams are more highly trained than the Master Fitness Trainers and they travel to the units in the field and provide assistance. They may go to a specialized unit such as an airborne unit and give them special training which would help improve their physical performance and conditioning for the specific tasks their assignments require (Goldstein, 1983, pp. 37-38; Drews, 1984, p. 49).

While fitness has been of great interest to the United States Army for many decades, in the early eighties there was a shift toward wellness. While it is still very important for soldiers to be in good physical condition,

the concept is expanded in wellness programs that focus on the total person. Wellness programs include weight control, nutrition, smoking and smokeless tobacco cessation, stress management, and mental health. The Army has gone beyond the unit fitness emphasis, and has developed a publication that is aimed at the individual soldier. The publication, The Individual's Handbook on Physical Fitness (Department of the Army, 1983) provides information on various aspects of fitness which soldiers can apply to their daily lives. The Army also includes the family in its fitness and wellness programs. In 1984 the Department of the Army publication, The Family Fitness Handbook, was distributed to all Army families. This handbook addresses fitness issues, nutrition, and ways for the family to get fit together.

To ensure that soldiers maintain an appropriate level of physical fitness they are required to take the Army Physical Fitness Test (APFT) twice each year. The APFT is a three event test which consists of: 2 mile run for time; push-ups in a two minute period and; sit-ups in a two minute period. The test scoring standard is based on age and gender and is administered to all soldiers. The maximum score in each event is 100 points; a perfect score would be 300 points. A soldier must earn 60 points in each event to pass the APFT. Soldiers scoring 290 or above are authorized to wear the physical fitness excellence badge on their physical fitness uniform.

The APFT has changed in the past two decades. In the 1970s, the test for women consisted of modified push-ups (done on the knees), sit-ups, three hundred yard shuttle run, run, dodge and jump, and running in place. For the men the test contained the horizontal ladder, crab walk, sit-ups, run, dodge and jump, and a two mile run. In 1981 the APFT was changed to a three event test for men and women that is still used in 1993. The APFT test was changed in order to increase the fitness level of soldiers and to allow soldiers to stay in shape without the need for special fitness equipment. However, since 1981 the standards have changed. Tables 1 and 2 illustrate the changes in the minimum and maximum standards for the women and men in the Army from 1981 to 1993 ("Minimum/maximum Scores," 1985, p. 30).

In 1993, the Army continued to maintain a strong emphasis on fitness and wellness, and sought to add new programs, as well as improve and sustain the programs which are already in place.

## Women in the Military

Women have been serving in the military within the United States ever since the Civil War. In an article about women who fought at Bull Run, the first major battle of the Civil War, Hall (1990) shares a portion of a newspaper article from the Rhode Island State Archives about Kady Brownell, one such woman:

Table 1

Women's Army Physical Fitness Standards 1981 and 1993

Army Physical Fitness Standards for Women 1981 Minimum/ Maximum

| Age | Push Ups | Sit Ups | Two Mile Run |
|---|---|---|---|
| 17-25 | 16/40 | 27/61 | 22:14/17:10 |
| 26-30 | 15/38 | 25/51 | 22:29/17:25 |
| 31-35 | 14/34 | 23/41 | 24:04/19:00 |
| 36-39 | 13/30 | 21/31 | 25:34/20:30 |
| 40-45 | - | - | 26:00 |
| 46-50 | - | - | 27:00 |
| 51-55 | - | - | 28:00 |
| 56-60 | - | - | 29:00 |

Army Physical Fitness Test Standards for Women 1993 Minimum/Maximum

| Age | Push Ups | Sit Ups | Two Mile Run |
|---|---|---|---|
| 17-21 | 18/58 | 50/90 | 18:54/14:54 |
| 22-26 | 16/56 | 45/85 | 19:36/15:36 |
| 27-31 | 15/54 | 40/80 | 21:00/17:00 |
| 32-36 | 14/52 | 35/75 | 22:36/18:36 |
| 37-41 | 13/48 | 30/70 | 23:36/19:36 |
| 42-46 | 12/45 | 27/67 | 24:00/20:00 |
| 47-51 | 10/41 | 24/64 | 24:30/20:30 |
| 52+ | 9/40 | 22/62 | 25:00/21:00 |

Table 2

Men's Army Physical Fitness Standards 1981 and 1993

Army Physical Fitness Standards for Men 1981 Minimum/ Maximum

| Age | Push Ups | Sit Ups | Two Mile Run |
|---|---|---|---|
| 17-25 | 40/68 | 40/69 | 17:55/13:05 |
| 26-30 | 38/66 | 38/67 | 18:30/13:40 |
| 31-35 | 33/61 | 36/65 | 19:10/14:20 |
| 36-39 | 32/60 | 34/63 | 19:35/15:05 |
| 40-45 | - | - | 20:00 |
| 46-50 | - | - | 21:00 |
| 51-55 | - | - | 22:00 |
| 56-60 | - | - | 23:00 |

Army Physical Fitness Test Standards for Men 1993 Minimum/Maximum

| Age | Push Ups | Sit Ups | Two Mile Run |
|---|---|---|---|
| 17-21 | 42/82 | 52/92 | 15:54/11:54 |
| 22-26 | 40/80 | 47/87 | 16:36/12:36 |
| 27-31 | 38/78 | 42/82 | 17:18/13:18 |
| 32-36 | 33/73 | 38/78 | 18:00/14:00 |
| 37-41 | 32/72 | 33/73 | 18:42/14:42 |
| 42-46 | 26/66 | 29/69 | 19:06/15:06 |
| 47-51 | 22/62 | 27/67 | 19:36/15:36 |
| 52+ | 16/56 | 26/66 | 20:00/16:00 |

> She learned all the accomplishments of soldiering. Daily she went to target practice and carried a rifle as well as the colors. Since she was allowed as many trial shots as she liked, she became one of the best marksmen in the regiment. Also, she practiced with the sword at her belt and marched in line beside her husband, wearing the sword and carrying the flag. (p.49)

American women have continued to serve their country throughout the decades since the Civil War. Women served with distinction in World War I, the Spanish-American War, World War II, the Korean War, the Vietnam conflict, the invasions of Grenada, Panama and most recently the Persian Gulf War.

Goldman (1973) reported on the trends of women serving in the military. During the early years most women served as nurses. The Army Nurse Corps was formed in 1902 during the Spanish-American War, officially allowing for uniformed nurses. Nineteen forty-two saw the establishment of the Women's Army Auxiliary Corps, which was changed in 1943 to the Women's Army Corps (WAC). The use of women during World War II was basically to "free-up" men from administrative, clerical and logistics positions so that they could fight. "In 1945, the military reached a high point of over 12 million active officers and enlisted persons, with 265,006 women" (p. 895). This large number of women accounted for 2.18% of the total force.

After World War II the women returned to their homes, and by the 1950's the number of women in the military had been reduced to 22,069. The Korean War saw another increase; 35,191 women served during this conflict. The number of women serving in the early 1960's remained relatively stable with approximately 30,000 women in uniform. The Vietnam conflict produced another increase; "the number of women increased slowly from 35,173 in 1967 to 42,814 in 1971, with the percentage moving steadily up toward the 2% level" (p. 895). See Figure 1 for strength of women in the Army from 1940-1990 (Statistical Abstract of the U.S., 1960, 1970, 1974, 1976, & 1992).

There was a ceiling restricting the number of women on active duty not to exceed 2% of the total service population (Goldman 1973; Holm, 1982). Public Law 90-130 was passed in November 1967 removing the 2% quota on women in the armed forces.

> The United States entered the 1980s leading the world in the use of women in the military. In ten years, the number of women in the military had increased sixfold. In the last year of the Carter Administration, the services were recruiting more new women each year than the total strength of the women's components eight years earlier. In 1981, women accounted for 14% of all new recruits and 9% of the total force. Numbers aside, American military women were

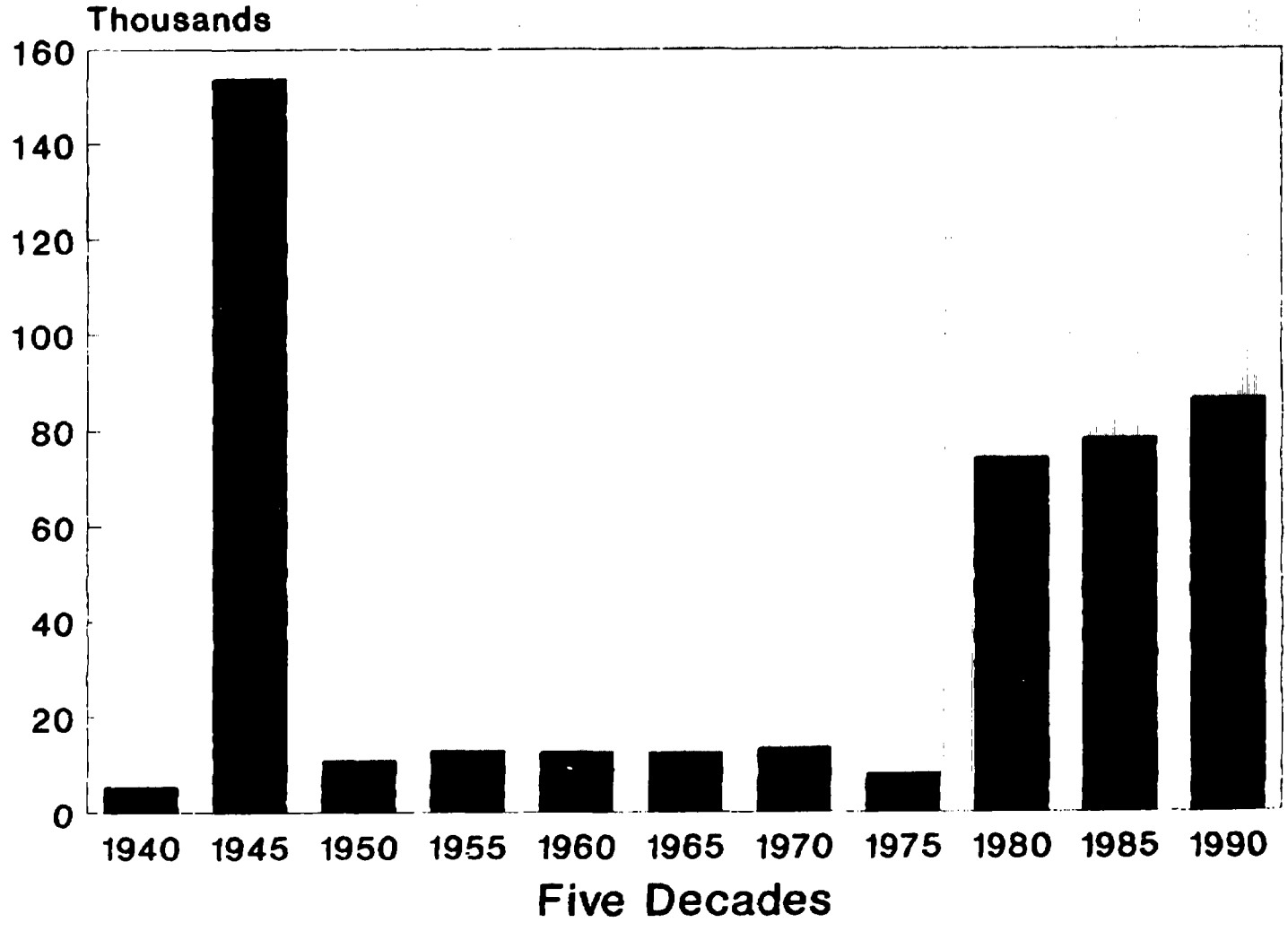


Figure 1. Number of Women in the United States Army 1940-1990

> more widely employed than military women anywhere else in the world. Ninety-five percent of all military jobs were open to women, and 28.5% of all women were employed in nontraditional jobs. (Mitchell, 1989, p. 114)

Figure 2 illustrates the number of women in the U.S. Army from 1982 through 1992 (Statistical Abstracts of the U.S., 1992).

The issue of American women in combat has created an emotional debate. The debate is very seldom based on hard facts as there are no studies on the topic of American women in combat. Most articles on the topic are editorials based on expert opinion. Presently there is a combat exclusion policy which does not allow women to receive certain training on specific pieces of equipment such as the M1A2 Abrams tank or serve in various combat designated units.

Today's battlefield is extremely fluid, and the forward edge of the battlefield is not as easily defined as it was during previous conflicts. The result is that commanders find themselves in situations in which women are in fact in combat. During the invasion of Panama in 1989, Army Captain Linda Bray, while commanding a Military Police unit, was given orders to attack an enemy occupied dog kennel. Under enemy fire, she led her soldiers into the compound. When the firefight was over there were three members of the Panamanian Defense Force dead and an

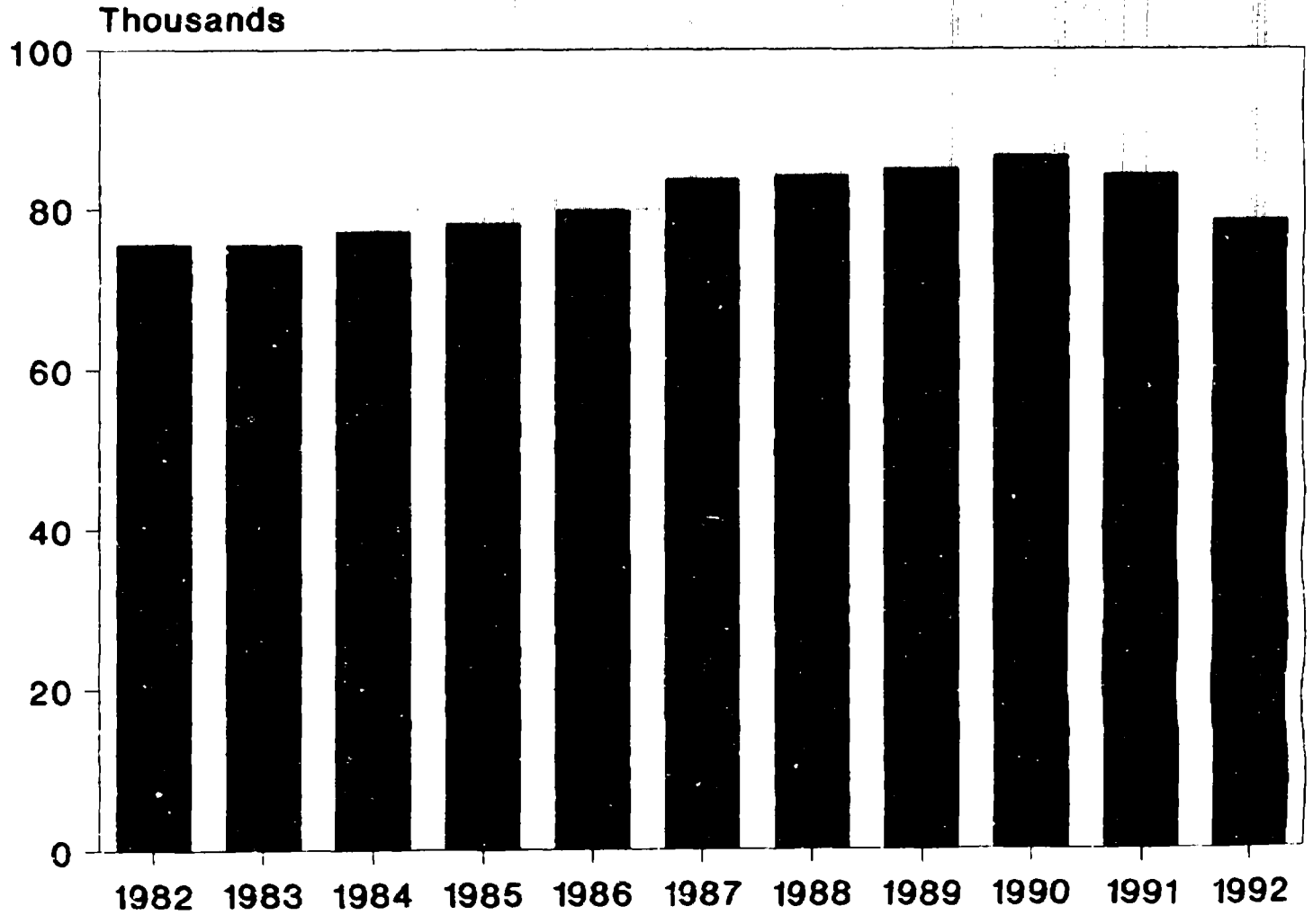


Figure 2. Number of Women in the United States Army 1982-1992

enlisted woman had captured an enemy soldier (U.S. News & World Report, 1990, p. 12).

In August 1990, United States forces were deployed to South West Asia as part of a United Nations peace keeping force in support of Operation Desert Shield. Over 35,000 women served in the Gulf War. During the war women served in a variety of combat support and combat service support roles. Sergeant Theresa Lynn Treloar was assigned to the Second Army Cavalry Regiment and served as far forward as the combat exclusion law would allow; she was on the border. Sergeant Treloar was selected to serve in this situation by her commander, because he wanted the best soldiers up on the border; gender was not an issue (Shenon, 1991).

Women faced the same horrors of war as did the men. They were wounded, killed and taken prisoner of war (POW). Major Rhonda L. Cornum, a flight surgeon assigned to the XVIII Airborne Corps, was taken as a POW after the aircraft in which she was a passenger crashed. Less than a week after her capture she was released.

The SCUD attack of February 27, 1991 killed three women soldiers (Terry, 1991, p. B1). Major Marie T. Rossi a CH-47 Chinook pilot spoke to the Cable News Network television about her role as a pilot flying supplies and soldiers into combat zones. During the interview she said:

> Sometimes, you have to disassociate how you feel personally about the prospect of going into war

> and, you know, possibly see the death that's going to be out there. But personally, as an aviator and a soldier, this is the moment that everybody trains for - that I've trained for - so I feel ready to meet a challenge. (Sullivan, 1991, p. B4)

Less than a week after her nationally televised CNN interview, while piloting her aircraft in poor visibility, Major Rossi struck a microwave tower and crashed. She, along with three of her crew members, was killed.

The 824 page official final Department of Defense report to Congress on the performance of the forces during the Persian Gulf War dedicated two and one half pages to the role of women during the operation. The following is an excerpt from that document:

> Women were administrators, air traffic controllers, logisticians, engineer equipment mechanics, ammunition technicians, ordnance specialists, communicators, radio operators, drivers, law enforcement specialists and guards. Many women truck drivers hauled supplies and equipment into Kuwait. Some brought enemy prisoners of war back to holding facilities. Many flew helicopters and reconnaissance aircraft. Still others served on hospital, supply, oiler and ammunition ships. Others served as public affairs officers and chaplains.

> Several women commanded brigade, battalion, company, and platoon size units in the combat support and combat service support areas. They endured the same hardships under the same harsh conditions as their male counterparts. The deployment of women was highly successful. Women performed admirably and without substantial friction or special considerations. (Department of Defense, April 1992, p. 647)

On April 28, 1993, Secretary of Defense Les Aspin issued a directive lifting the restrictions on women in aerial and naval combat. The services are now required to train women in combat aircraft and assign them into those units ("U.S. Women," April 28, 1993). In early May 1993, the Army identified the first three women pilots to begin transition training in the AH-1 Cobra and the AH-64 Apache attack helicopters ("First Women," May 17, 1993, p. 2). Lieutenant Charlene Wagner completed the AH-1 Cobra transition course on June 17, 1993; on July 23, 1993 Lieutenant Angie Norman and Warrant Officer Cathy Jarrell graduated from the AH-64 Apache attack helicopter transition course. Lieutenant Wagner then went to serve as a platoon leader with the 4th Battalion, 501st Aviation Regiment, 17th Brigade in the Republic of Korea. Lieutenant Norman went on to serve with the 2nd Battalion, 229th Attack Helicopter Regiment at Ft. Rucker, Alabama and Warrant Officer Jarrell was stationed at Ft. Campbell,

Kentucky with an attack helicopter unit (W. Reynolds, Public Affairs Specialist, Ft. Rucker, AL, personal communication, March 8, 1994).

## Physical Education at the United States Military Academy

**U . .he fields of friendly strife**
**Ar. . wn the seeds**
**That, upon other fields, on other days**
**Will bear the fruits of victory**

**General Douglas MacArthur**

The United States Military Academy is a unique institution. The physical education program reflects this uniqueness. It is important to understand how it has developed into the program that it is today. This section has three sub-sections which will address the following: an historical overview of the program, the Department of Physical Education today, and a discussion of women at USMA.

### Historical Overview

There have been two major pieces of historical research which have focused on the evolution of the Department of Physical Education at the Military Academy from the early days to the present. The first was conducted by Captain Robert Degen (1968) The Evolution of Physical Education at the United States Military Academy. The focus was on the development of the physical education program from 1802 through 1965. The second piece of

historical research was conducted by Dr. Mary Lou Remley (1992), while she was serving as Visiting Professor with the Department of Physical Education at the Military Academy during the academic year 1991-1992. Remley's work is titled, Physical Education at the United States Military Academy 1966 - 1992 and serves as a companion piece to Degen's 1968 report/study.

The United States Military Academy first became an institution of higher education in 1802; at its inception there was no physical education program in place. It was not until after the arrival of Alden Partridge in 1815 as the fourth Superintendent of the Military Academy that physical activities became a regular part of a cadet's daily life; this change occurred sometime between 1816 and 1817 (Degen, 1968, p. 19).

Physical education and training has been an integral part of the West Point curriculum since 1817. In fact, it is reported that West Point had the first full time physical education instructor at any educational institution. A Frenchman, Pierre Thomas, taught the first officially recognized sport at West Point, fencing (USMA, DPE Syllabus, 1980).

In 1817 Sylvanus Thayer followed Alden Partridge as Superintendent. He had more of an academic focus. During the Thayer years the physical education ". . . curricular program was maintained, but voluntary athletic participation was frowned upon by Academy officials"

(Degen, 1968, p. 82). In 1839, a riding program was implemented, and in 1846 a daily regime of gymnastics was instituted. Very often physical education and military skills were taught by the same group of instructors; for example, an instructor would teach gymnastics as well as small arms instruction.

In 1858, Superintendent Colonel Richard Delafield asked Lieutenant John C. Kelton to develop a physical education program modeled after the military academies of Paris and Vienna. Lieutenant Kelton traveled to Europe, and upon his return implemented the first program of instruction in physical education at the Military Academy (USMA DPE Syllabus, 1976, p. 32). This program consisted of physical education for all four classes. It included such activities as calisthenics, swimming, bayonet drills, fencing, and gymnastics. Unfortunately, this program was in place for only one year. The onset of the Civil War terminated this program, and interest in physical education was not renewed until 1885 when Colonel Herman J. Koehler became the director of the Department of Physical Education.

> Koehler was a professional physical educator and fine athlete. His dynamic personality and leadership shaped the program for the next 38 years and his influence is still evident in the contemporary program. Without a doubt, he is the

"Father" of West Point physical education (Degen, 1968, p. 83).

Under Koehler's guidance a new gymnasium was built, and physical education was again expanded to cover all four classes. A compulsory intramural program was implemented: cadets received training in sports to include coaching and administration. Standards were developed for cadets to achieve (Degen, 1968, pp. 32-60).

Koehler had laid the foundation for physical education at the Military Academy, but it still had weak areas. It had been recognized that all cadets did not measure up in terms of physical abilities. In 1943 a ten item physical ability test was developed and adopted by the Military Academy; this became the physical standard by which all cadets would be measured. Physical education continued to be viewed as important, and in 1944 cadets began to receive graduation credits for physical education. Also, for the first time, in 1944 a cadet was dismissed from the Military Academy for failing to meet the established physical standards. Fencing was eliminated from the program in 1945 and riding in 1947 (Degen, 1968, p. 80). Additionally, beginning in 1947 the physical aptitude examination was administered to all candidates seeking admission to the Military Academy. Other changes included the institution of the posture program and special exercise program, reconditioning and weight monitoring and management programs (Degen, 1968, p. 80). There have been minor

changes and modifications to the program, but basically in 1975 it remained very similar to the program introduced by Koehler.

USMA Department of Physical Education Today

The mission of the United States Military Academy is "to educate and train the Corps of Cadets so that each graduate shall have the attributes essential to professional growth as an officer of the Regular Army, and to inspire each to a lifetime of service to the Nation" (USMA Catalog, 1992-93, p. 5). The concept of ongoing physical development of each cadet is an integral part of the mission of the Military Academy. Physical Education is one of the three pillars of the total West Point experience; academic and military training are the other two.

The recognition that physical performance is an important part of being a soldier and leader has resulted in physical education grades being included in a cadet's class standing (Remley, 1992, pp. 94-95). A cadet's overall class rank or General Order of Merit is comprised of a percentage in each of these areas. The Academic Performance Score is weighted 55%, the Military Performance Score 30%; the Physical Performance Score accounts for 15%. This emphasis reinforces the intent that, upon graduation from the Military Academy, the new officers will be leaders who are both physically active and physically fit.

For the first 140 years the head of the Department of Physical Education held the position for an unspecified length of time. In 1953 the Director of the Department of Physical Education became a permanent position. This has allowed for greater stability within the department. The Director is appointed, and is allowed to remain in that position until retirement. The current director of the department, Colonel James L. Anderson, has held the position since 1974. He is a graduate of USMA and earned his masters degree in 1965 from Indiana University and his doctorate in 1978, also from Indiana University.

The department faculty includes a core of civilian faculty members who hold civil service appointments. The military members all earn advanced degrees from various well-known physical education universities and colleges (University of Georgia, Indiana University, Springfield College, Pennsylvania State University), and then serve a four year tour at the Military Academy. Each year several new officers arrive as instructors. The annual rotation of a portion of the military faculty allows for new ideas and young, energetic officers who revitalize the department.

Organization of the Department of Physical Education. The Department of Physical Education is organized into several branches to carry out its assigned functions. Instruction is the largest branch; it provides all of the classes which are administered by DPE. There are directors who oversee the program for each class. The Department has

six other branches which support the physical education instruction program. These branches include: Supply and Services, Sports Medicine, Research and Evaluation, Intramural, Testing, and Guidance.

The missions for each of these special branches are as follows: Supply and Services provides the logistical support and physical security for DPE. Sports Medicine provides emergency, preventive, and rehabilitative services to cadets. Research and Evaluation plans, organizes, coordinates and supervises scientific research within the department. The Intramural section plans and coordinates the intramural program which is scheduled every day after classes throughout the academic year. The Testing branch is responsible for planning, coordinating and administering the various tests administered to the entire Corps of Cadets throughout the year. The Guidance branch supervises a program in which each cadet company has a DPE officer who monitors directly the progress of the cadets within that company. The Organizational Chart is presented in Figure 3.

Instruction program. The physical education instruction program is a four year process which begins when cadets first enter the Military Academy at the end of June. The physical education program for cadets includes a physical development program, physical education activities, and organized athletics.

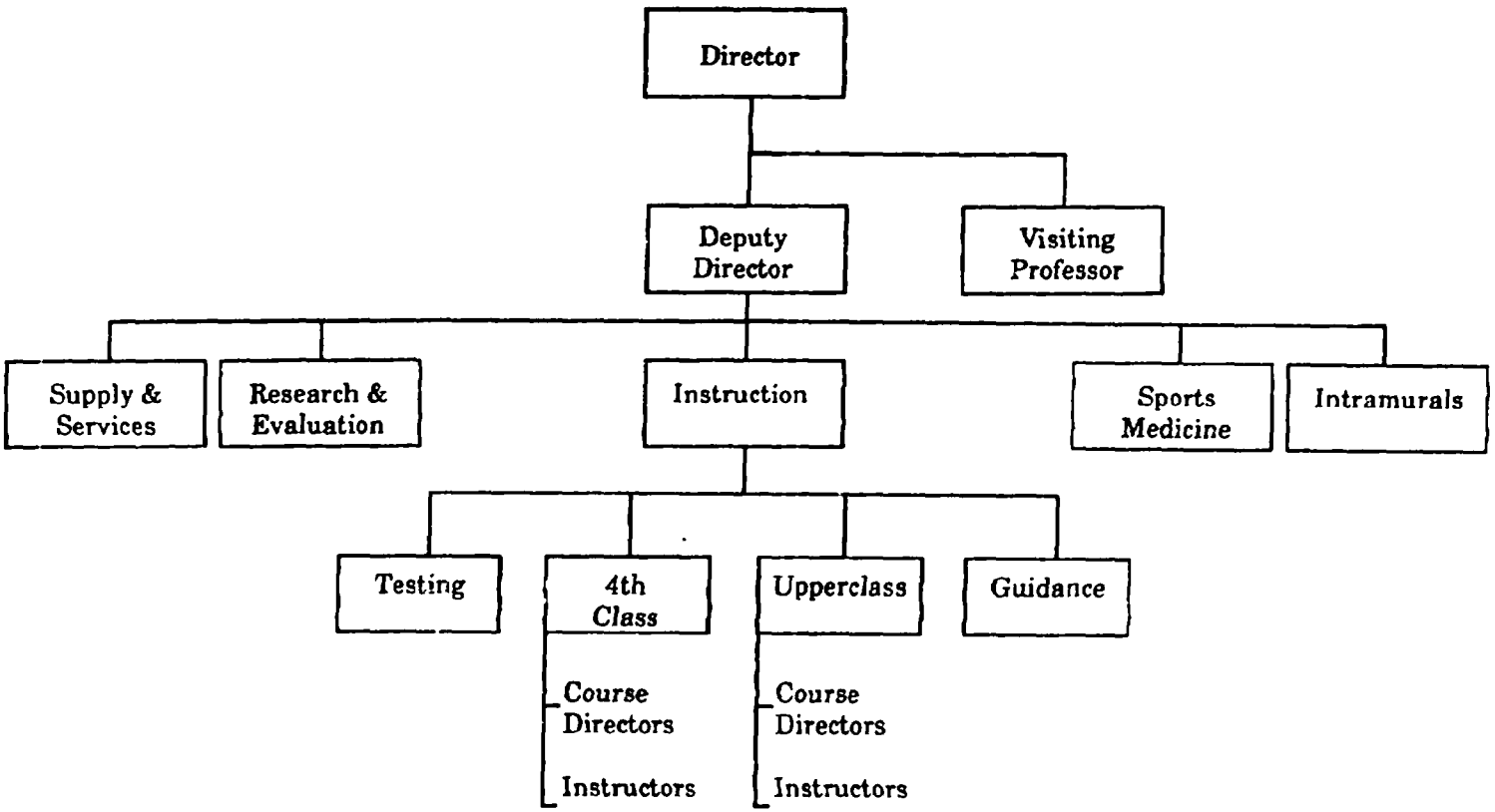


Figure 3. United States Military Academy Department of Physical Education Organizational Chart

The physical development program ". . . compliments the military, intellectual, and moral-ethical development of cadets" (USMA, DPE Syllabus, 1980, p. 1). During their first summer, prior to the start of the academic year, they engage in rigorous military and physical training programs. Cadet Basic Training (CBT) has nine objectives: 1) pre and post fitness testing on the Army Physical Fitness Test (APFT), 2) reveille exercises and running, 3) mass athletics, 4) swimming ability evaluation/beginner swimming instruction, 5) weight and pull-up surveys, 6) posture evaluation and remedial programs, 7) confidence obstacle course, 8) injury survey and remedial programs, and 9) athletic sweepstakes (USMA, DPE Syllabus, 1984).

The purpose of the Freshman or Fourth Class physical education program is ". . . to expose cadets to a variety of experiences that are both physically and psychologically demanding and that develop a positive, self-confident attitude" (USMA, DPE Syllabus, 1984, p. 5). All fourth class cadets participate in the same course of physical education instruction during their first year. There are four subcourses during the academic year, and each cadet takes two subcourses each semester. The cadets attend nineteen sessions per subcourse in: Gymnastics (men and women), Fundamentals of Physical Fitness (men and women), Swimming (men and women), Boxing (men only), and Self-Defense I (women only).

Cadet Field Training (CFT) occurs during the summer between the freshman and sophomore years. This is another period of intense military and physical training. CBT and CFT are both run by the juniors and seniors who assume various leadership positions under the supervision of DPE faculty members.

The current sophomore class instruction also includes four mandatory subcourses: Close Quarters Combat (men and women), Wrestling (men only), Self Defense II (women only) and, Master Fitness Training (men and women).

The Upperclass physical education program includes the sophomore, junior and senior classes. "A primary function of the Upperclass program is to expose cadets to a variety of activities which have carryover value, activities which can be pursued throughout a lifetime of regular physical activity" (USMA, DPE Syllabus, 1984, p. 7).

During the junior and senior years cadets may take a variety of lifetime carryover sports, and are required to choose one subcourse per semester. There is a wide variety of lifetime sports available to the cadets which includes: aerobics, bowling, advanced tennis, badminton, handball, golf, lacrosse, ice skating, racquetball, handball, scuba, cross country skiing, downhill skiing, bicycling, soccer, squash, and strength development. Additionally, as seniors cadets take a War-Fighting Fitness (WFF) course as a part of the Master Fitness Trainer program.

"Every cadet an athlete, every athlete challenged" (United States Military Academy Catalog, 1992-93, p. 103). In addition to the mandatory and elective classes, all cadets compete in intramural, club sports or corps squad athletics.

Intramural program. Intramurals is an important part of a cadet's total physical education experience at USMA.

> The intramural athletic program is designed to meet the needs of cadets to acquire skills in individual and team sports, to develop physical ability, to participate in healthful, vigorous recreation, and to enjoy maximum opportunities for the development of leadership qualities. (USCC Circular, 1990-91, p. iv, v)

Cadets are required to participate in one intramural sport per semester. Upperclass cadets may participate in two. However, freshman may participate in only one per semester. Each term there are two intramural sessions. The guidance on exceptions for participation in intramurals is outlined in the Intramural Manual (USCC Cir 28-1, 1987-88, p. 3). These exceptions include: cadets whose names appear on current Corps Squad or Club Sport rosters, permanent members of Brigade Staff and Commanders above company level and staff members responsible for the program, and cadets excused by the Superintendent or Surgeon.

The following are the types of sports which are typically offered during each intramural season: football, soccer, 3 on 3 basketball, and team handball (early fall); 5'10" basketball, racquetball, and wrestling (late fall); basketball, boxing, street hockey, swimming, and wallyball (volleyball played on a racquetball court) (winter); cross country, flickerball, rugby, and softball (spring).

The intramural program provides opportunities for the cadets to act as coaches, managers, and referees as well as participants. Good organization is encouraged. All cadets are expected to enforce the rules and engage in fair play. Participation in the intramural program offers splendid preparation for a future leader.

Club sports. The club sports program provides cadets with the opportunity to compete at a higher level of competition than that offered from the intramural program. These cadets compete against other colleges and universities in 23 different sports.

Corps squad athletics. The term corps squad is equivalent to a varsity team at a civilian institution. Several of USMA's teams compete within Division I of the National Collegiate Athletic Association. The Military Academy has 29 intercollegiate varsity sports; the men compete in 18 and the women in 11. These sports for men include: football, soccer, cross country, 150 pound football, water polo, basketball, gymnastics, hockey, swimming, indoor track, wrestling, baseball, golf,

lacrosse, tennis, outdoor track, pistol and rifle. The intercollegiate varsity sports available for women include: cross country, tennis, volleyball, basketball, swimming, indoor track, softball, tennis, track, pistol and rifle.

Testing. Periodically during the year cadets take various fitness tests. Physical aptitude testing became part of the physical education program during the tenure of LT Koehler, the director of DPE from 1885-1923 (Larson, 1981). Today, physical aptitude testing begins prior to a cadet being admitted to the Academy; it is part of the admissions process. Physical aptitude and fitness testing continues throughout a cadet's four year educational and training experience at the Military Academy. It is considered important enough to be part of each cadet's grade point average and figures into a cadet's overall class ranking. Cadets who cannot meet the physical testing standards simply do not graduate, and forfeit their commissions.

The physical fitness testing of cadets goes on throughout the year. The objectives of the physical fitness testing are twofold: first, to evaluate the level of physical fitness of each cadet, and second, to motivate each cadet to train for and achieve his/her maximum physical performance.

There are three physical fitness tests administered each year; they are given during the fall, winter, and spring. The tests include the Army Physical Fitness Test

(APFT), the Indoor Obstacle Course Test (IOCT), the Physical Aptitude Test (PAT), and alternate tests. The test schedule for cadets by class is shown in Table 3.

Table 3

Cadet Test Schedule

| | Freshman | Sophomore | Junior | Senior |
|---|---|---|---|---|
| Fall | APFT | APFT | APFT | APFT |
| Winter | PAT | IOCT | IOCT | IOCT |
| Spring | APFT | APFT | APFT | APFT |

The PAT is a four event test which was designed to measure upper body strength, power and coordination, speed, agility, and anaerobic capacity. The four events include: pull-ups (upper-body strength), basketball throw (power and coordination), 300 yard shuttle run (speed, agility and anaerobic capacity), and standing long jump (power and coordination). This is similar to the test candidates take when applying for admission to the Military Academy; however, the women perform pull-ups instead of the bent arm hang used in the admissions test.

The APFT is the Army's physical fitness test. It is a three item test in which a maximum of 125 points is

available for each event. The events include: sit-ups (2 minute limit) which measures abdominal strength and endurance; push-ups (2 minute limit) which measures upper-body strength and endurance, and the 2 mile run which measures cardiorespiratory endurance (DOA, FM 21-20, 1982).

The IOCT is designed to evaluate the cadet's muscular strength, flexibility, agility, coordination and anaerobic capacity (USMA, DPE Testing Booklet, 1986-87). It has eleven obstacles which include: tunnel crawl, tire run, two hand vault, shelf mount, balance walk on horizontal bars, through the tires, balance beam traverse, wall scale, horizontal ladder, rope climb, and run two and three quarters laps on the track (USMA, Memo on IOCT Standards, June, 1990). The scores are scaled based on times, and a grade is assigned. The freshmen do not take the IOCT. The events which make up the IOCT are taught in gymnastics when the cadets are freshmen. To ensure that the cadets can perform all of the events safely, they do not take the IOCT until their second year as cadets.

Alternate tests are administered to cadets who are under long term medical profiles and are unable to take the IOCT, PAT or the 2 mile run. The alternate tests are the bicycle ergometer or a 10 minute swim test.

## Women at USMA

It was not until 1976 that Congress allowed women to be admitted into the three military academies: the United

States Naval Academy, the United States Air Force Academy and the United States Military Academy. The official document which allowed the inclusion of women into the "Long Gray Line" was Public Law 94-106, which was signed by then President Gerald Ford on 8 October 1975. Public Law 94-106 states that:

> . . . the Secretaries of the military departments concerned shall take such action as may be necessary and appropriate to insure that (1) female individuals shall be eligible for appointment and admission to the service academy concerned, beginning in calendar year 1976, and (2) the academic and other relevant standards required for appointment (admissions) training, graduation, and commissioning of female individuals shall be the same as those required for male individuals, except for those minimum essential adjustments in such standards required because of physiological differences between male and female individuals.

Bringing women into a formerly all male institution was not taken lightly at the Military Academy. "Academy authorities began to plan seriously for the admission of women in June 1975 when it became evident that Congress would pass legislation directing the admission of women to USMA" (Priest, Vitters, & Prince, 1978, p. 591). West Point brought in outside consultants to ensure they went

about the process of integration in the best possible way. The overriding philosophy at West Point was ". . . to challenge women to their utmost by including them in all aspects of cadet life and training" (Priest et al., 1978, p. 591).

The anticipated arrival of the first women cadets in July 1976 caused many facilities changes at West Point. Sleeping assignments had to be made; signs placed on rest room doors; and new uniforms designed. The arrival of women into the Academy had little impact on the academic departments, as they did not have to alter teaching styles or modify the curricula. However, for the Department of Physical Education the inclusion of women required that several major questions had to be addressed.

What are the basic physiological differences between men and women?

How might these differences affect the ability of women cadets to perform within established and future United States Military Academy (USMA) programs?

What adjustments in training programs and procedures will be necessary to accommodate for performance variances between men and women cadets resulting from these differences?

What types of physical training programs will provide them with the necessary physical

development and individual improvement? (Peterson, Vogel, Koval, & Tomasi, 1976, pp. 4-5)

In an attempt to answer these questions the Department of Physical Education initiated a study to evaluate the physiological capabilities of young women. The testing was conducted during the period of January through March 1976. The study, Project 60 (Peterson et al. 1976) evaluated sixty high school aged women (ages 16-18) on a battery of physical abilities tests and measurements.

> A pre-test and post-test were conducted which measured . . . physical anthropometric and demographic characteristics; physical fitness-related qualities (aerobic power, strength, endurance, and flexibility); physical performance-related items (1½ mile run, block-shuttle run, and the PAE for women); and written psychological inventories. (Peterson, et al., 1976, pp. 7-8).

After a two week introduction, pretesting of fifty-eight women was conducted. (Two women had dropped out of the study.) The women were randomly assigned to one of three groups. Eighteen women were placed in a control group, and did not engage in any experimental exercise program. Twenty were placed in a three-day-a-week strength training program. Twenty participated in a four-day-a-week reveille exercise program.

The experimental training lasted for a seven week period. At the conclusion of the program all fifty-eight women were again tested. The conclusions of the study were as follows:

> Two basic interpretations of this [sic] data can be made:
>
> (1) the young women in Project 60 were, in many instances, far more physically proficient than a review of the literature on the physical abilities of women would have led USMA personnel to believe; and
>
> (2) on a number of tasks, even above-average women physical performers performed at a level below that achieved by the average male cadet. As a result, it is apparent that in order to maintain the one-track cadet experience with the minimum essential adjustments, a concerted effort must be made to identify and attract high-level women physical performers to become women cadets. (Peterson, et al., 1976, p. 111)

On July 1st 1976, 119 women entered with the class of 1980. During their first summer at USMA, Stauffer (1976) conducted a study which compared the men and women from the class of 1980 on certain physical performance measures. The major thrust of this study was to determine the ". . . minimal essential adjustments in such performance standards required because of physiological differences between male and female individuals" (Public Law 94-106). Thirty men

and thirty women were selected for the study. This study was conducted during Cadet Basic Training (CBT), which is a time of intense physical training for the new cadets. There were pre and post-test measures of arm and shoulder girdle strength, leg strength, power, power endurance, hand grip strength, cardiorespiratory efficiency, body composition, and anthropometric measures. The pre-test was conducted during the second week in July and the post-test was conducted during the fourth week in August.

The results indicated that there was a "significant physiological performance difference between men and women. These physiological performance differences were evident in upper body and leg strength, power, power endurance, and grip strength" (p. 34). However, there was no significant difference in cardiorespiratory efficiency relative to body weight between the men and women. The results of this study indicated the need to make adjustments in grading and performance standards for women.

Recognizing that physiological differences do exist between men and women, there were guidelines established which emphasized equal effort rather than equal performance. The governing guidelines were covered in the "Doctrine of Equivalent Training" which was developed by the Department of Physical Education (Remley, 1992).

The following guidance was utilized by the Department of Physical Education in determining the changes that had to be made in the physical education curriculum:

> Recognition of the physiological differences and capabilities between men and women is made in the construction of grade scales and during subjective evaluation. In activities that place a premium upon cardiovascular endurance and upper body strength, for example, accommodation is made for women in recognition of these disadvantages they have in competing with men. (USMA, DPE Syllabus, 1980)

When the first women arrived in July 1976 the Academy personnel changed certain aspects of training as Cadet Basic Training progressed. These changes were noted in a Memorandum for Record, dated 28 October 1976, the subject was: Changes in the 1976 CBT Summer Physical Education Program. The changes included the wearing of t-shirts by all new cadets during reveille, PT and mass athletics; an interval training program was initiated to help improve the running ability of new cadets; female new cadets used the lighter M16 rifle during rifle calisthenics in CBT II; and fewer hills were run during both CBT I and CBT II in order to reduce physical stress on female new cadets.

The change in the courses offered during the Plebe year was the addition of Self Defense I and Self Defense II for women; they did not take wrestling or boxing. The swimming program was not changed and the only change in the gymnastics program was the elimination of the parallel bars

and high bar for women which were replaced with the balance beam and uneven bars (USMA Fact Sheet, December 1975).

The women in the first class at West Point fared well during their first year at USMA. The highest woman academically was 44th in the class; 23% of the women made the Dean's List. The women's basketball team compiled a winning 14-5 record during their first season; men were their cheerleaders.

The arrival of women had very little impact on the intramural program. The women participated in all sports except those considered contact sports. In 1979-80 the statement "Women will not be assigned in any capacity to football, boxing, wrestling, and lacrosse" was added to the participant requirement section of the intramural handbook (Remley, 1992, p. 147).

Since the admission of women in 1976 there have been some modifications of the DPE curriculum. Adjustments were made in DPE with regard to the testing standards for the women cadets. In 1992 in a report to Military Academy alumni on the status of women cadets the different physical education testing scales are compared to the use of weight classes used in the sports of wrestling and boxing (Hammond, 1992, p. 35). The scales used for grading the women cadets have changed over the years as the women entering the Military Academy appear to be getting faster and stronger.

In a comparison of the mean two mile run times for the women cadets from the classes of 1980, 1985, and 1990 during their four years as cadets there is a marked difference (See Figure 4). In their first year the classes of 1980 and 1985 ran the two miles in close to 16 minutes, while the women from the class of 1990 completed the run with a mean time of 14:24. However, as they continued through their college years at USMA, all three classes became slower. As seniors the class of 1985 was 28 seconds faster than the class of 1980, and the class of 1990 was 2 minutes and 15 seconds faster than the class of 1980 (Remley, 1992, p. 75).

It has been known for some time that mean performance scores for women on tests of upper-body strength are lower typically than those of men. The IOCT had several events which relied heavily on upper-body strength. In 1981 the parallel bar walk was eliminated as an event in the IOCT. It was replaced with an agility and balance event, the tire run and balance beam walk. During that testing year (1981-82) the failure rate on the IOCT decreased significantly both for women and men. The failure rate for the women was reduced from 24% to 9% and for the men from 12% to 3% (Remley, 1992, p. 92).

Success on the IOCT is measured with a fast time. The women have decreased their times on the IOCT resulting in the changing of the grading standards. An A letter grade

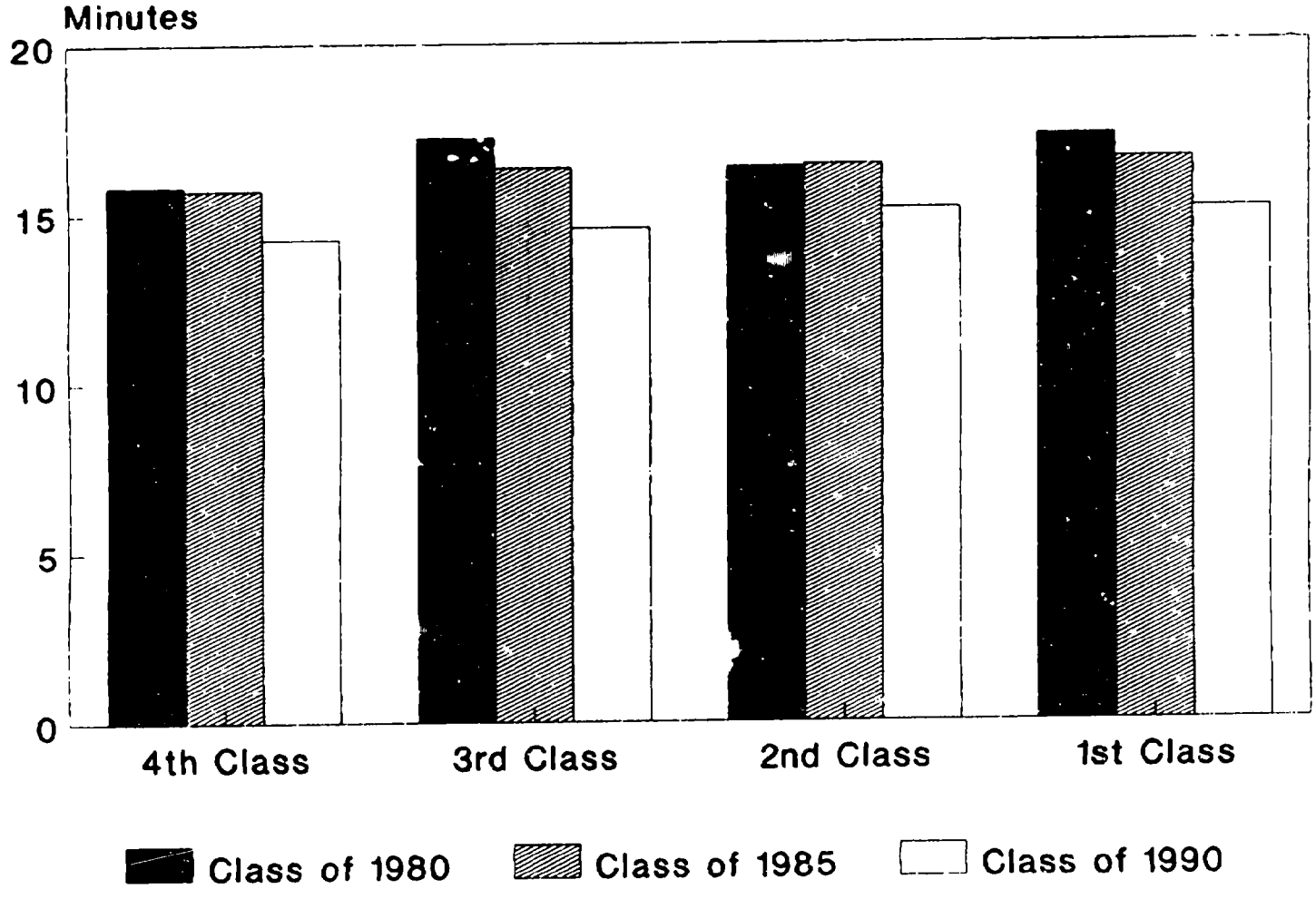


Figure 4. Comparison of Mean Two Mile Run Times Across a Four Year Cadet Career (Classes of 1980, 1985, and 1990)

could have been earned by a woman cadet from the 1980 class during her senior year by completing the IOCT in 4:15. That same time would have earned a woman from the class of 1990 a letter grade of B (Figure 5).

The Military Academy APFT has been revised as a result of the admission of women. In 1991 the standard for the sit-up scoring was changed. Women are now required to perform more sit-ups than the men to obtain the same score. This change was made because the women were consistently outperforming the men on the sit-up event (USMA, Department of Physical Education Memorandum, 3 December 1990). Figure 6 illustrates the improvements the women from the classes of 1980, 1985, and 1990 made in the sit-up event during their four year cadet careers; data for the class of 1980 was not available for their freshmen year (USMA, Department of Physical Education Testing Data, 1977, 1978, 1979, 1981, 1982, 1983, 1984, 1986, 1987, 1988, & 1989).

Recognition of how well women had been performing at USMA became evident when, in August 1989 then Superintendent General David Palmer announced that Cadet Kristen Baker would be the First Captain of the Corps of Cadets. The First Captain is in charge and responsible for the daily operations of the entire Corps of Cadets. Kristen Baker was the first woman to hold this prestigious position.

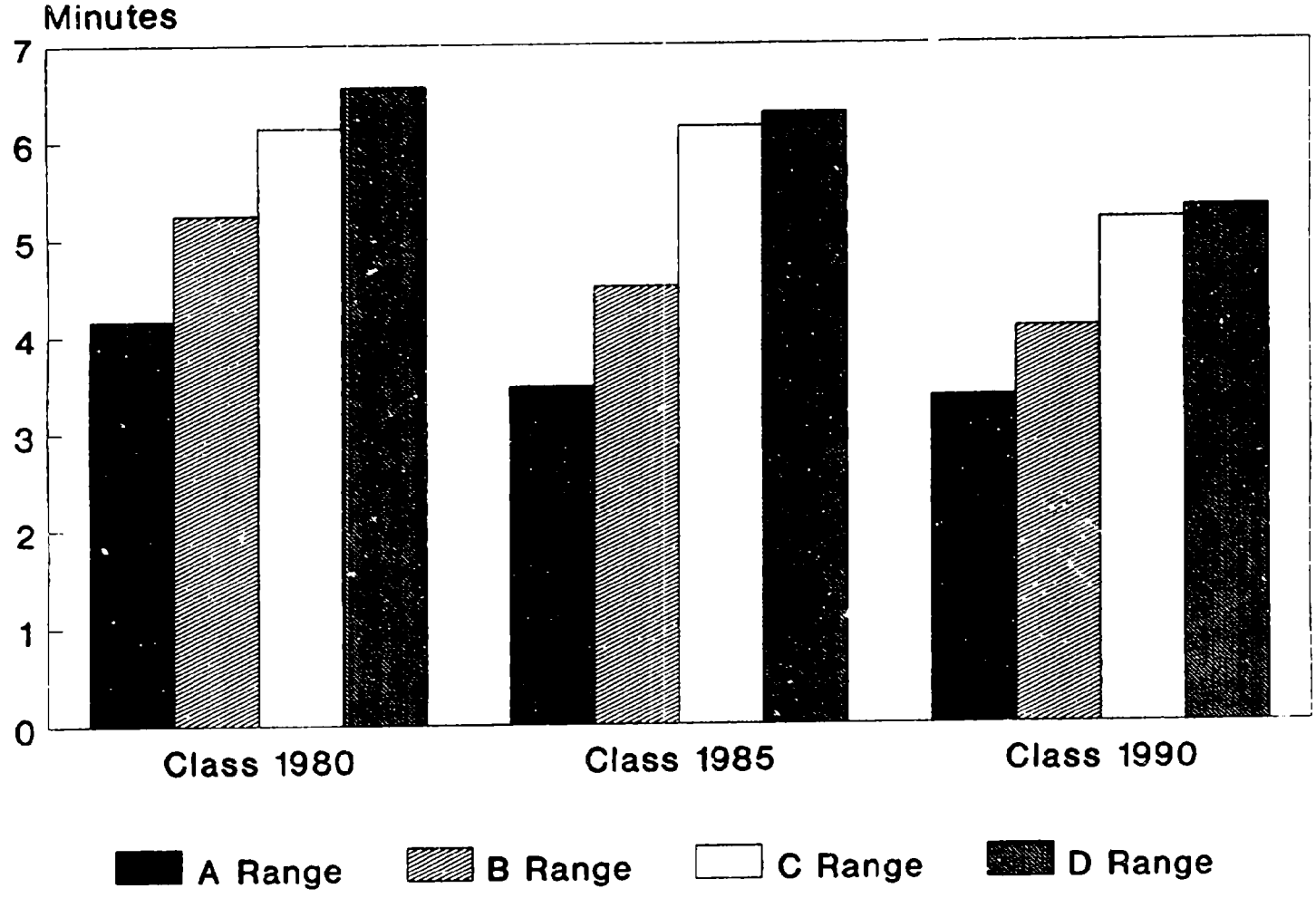


Figure 5. Indoor Obstacle Course Test Grade Standards for Women Cadets of the Classes of 1980, 1985, and 1990

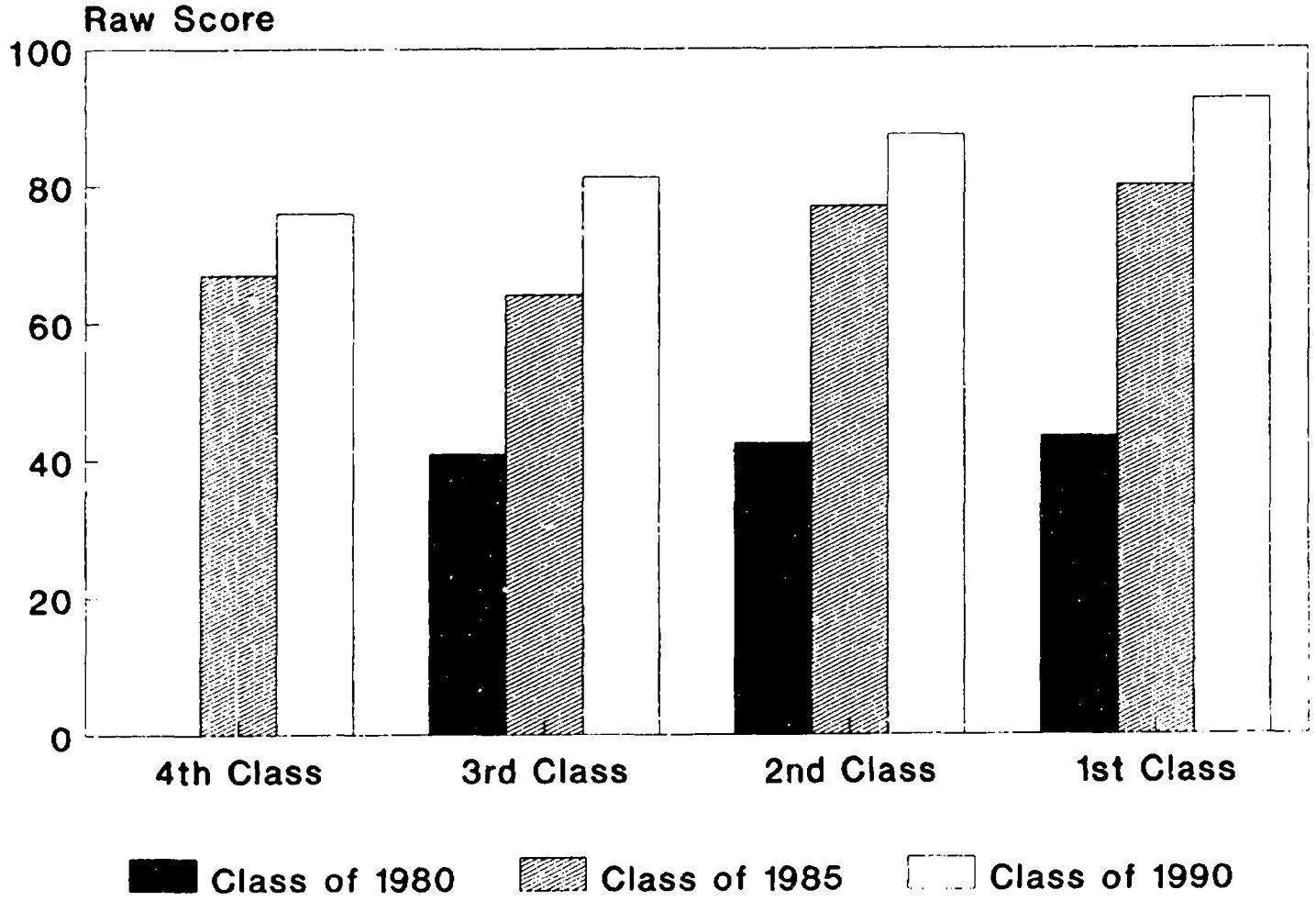


Figure 6. Comparison of Women Cadet Mean Sit-up Scores From the Classes of 1980, 1985, and 1990 Across a Four Year Cadet Career

In 1994, the women cadets continued to demonstrate that they could meet and exceed the standards of the United States Military Academy. Undoubtedly, as they continue to be challenged physically the women cadets at the Military Academy will continue to jump higher, run faster and become stronger.

## Curriculum Evaluation

"Evaluation is the determination of a thing's value. In education, it is the formal determination of the quality, effectiveness, or value of a program, product, project, process, objective, or curriculum" (Worthen & Sanders, 1987, p. 22).

Evaluation of students and curricula in schools in the United States occurs continuously in various forms. Americans are always trying to determine if what they are doing is working, or whether it could be accomplished more effectively some other way.

Evaluation can be conducted at various stages of curriculum development. Scriven (1967, p. 43) first used the terms formative and summative to describe the evaluation process which is conducted at two distinctly different times. Formative evaluation is conducted when a curriculum is being implemented and is still mutable. Evaluation at this early stage is conducted to ensure that the curriculum is achieving its intended outcomes; improvements can be easily made at this time. Summative

evaluation is carried out after a curriculum is already in place; this is a terminal evaluation, and provides an overall evaluation of the entire curriculum.

The formative evaluation of the physical education curriculum at West Point is conducted on a regular basis. This is usually done through various forms of testing. Cadets are tested frequently on physical aptitude, physical fitness, sports skills and knowledge of sports skills and fitness.

Additionally, cadets may be administered a written questionnaire to determine the strengths and weaknesses of a particular course or of the program as a whole. As a result of this type of formative evaluation the curriculum is modified to make it more effective in achieving the desired outcomes.

The final exam for the Master Fitness Trainer program is an example of a summative evaluation in physical education. The cadets take this final examination after they have experienced the entire physical education program.

Evaluation should be designed to improve the program's effectiveness in achieving overall long-term goals in ways consistent with the prevailing educational philosophy or value orientation. It is important to clarify the relevant value orientation when undertaking an evaluation of an educational institution's curriculum.

Values are inextricably entwined with the curriculum. Curriculum development requires decisions concerning what should be taught and how teachers should work with students to guide their learning. "Decisions about should or ought are value decisions" (Schubert, 1986, p. 99). Eisner and Vallance (1974) provided useful descriptions of five common value orientations or perceptions for developing the curriculum. The orientations were: cognitive process approach, curriculum as technology, curriculum for self actualization, curriculum for social reconstruction, and academic rationalism.

Each of these orientations clearly defines where the emphasis of the curriculum lies. Cognitive process does not have much emphasis on content; the focus is instead on how a student learns. The teacher's role is to determine what is the most efficient intellectual process through which learning occurs, and then to provide the structure and environment for the student's development.

Curriculum as technology also focuses on process. However, it is more concerned with the actual technology by which knowledge is communicated, rather than the intellectual process of the learner. There is little focus on the learner; rather it is on the packaging and presentation of the material.

Self-actualization is student-centered, with strong emphasis on the development of the learner. The content is selected so as to be personally satisfying for the learner.

Social reconstruction has a strong emphasis on education and the curriculum within society. Societal needs and social change are stressed over the immediate needs of the individual.

Academic rationalism has a very traditional orientation. The goal is to enable the student to acquire the skills necessary to function in society.

The work of Eisner and Vallance and other curriculum specialists, and the recognition of the importance of value orientations and their relationship to the curriculum, led Jewett and Bain (1985), to identify five different value orientations which have influenced physical education. The five value orientations are: disciplinary mastery, social reconstruction, learning process, self-actualization, and ecological integration. Disciplinary mastery and ecological integration are of primary interest in evaluating the physical education curriculum at USMA.

Disciplinary mastery is the most traditional orientation to curriculum development. It ". . . places top priority on mastery of the subject matter, acquisition of the important knowledge, or the integrity and primacy of the academic discipline" (Jewett & Bain, 1985, p. 25).

The ecological integration perspective ". . . is based on the assumption that each human personality is unique. It incorporates the concept of 'celebration of self' or self-actualization" (Jewett & Bain, 1985, p. 28). Ecological integration promotes the individual as being all

that he or she can be within their particular environment; its focus is oriented toward the future.

The mission at USMA has very clear-cut goals. Many of these goals are accomplished through a method called task, condition and standard. The task is set forth, conditions to accomplish the task are identified, and the standard which must be met to successfully accomplish the task is stated. With such rigid requirements it is not surprising that the predominant value orientation at the Military Academy is that of disciplinary mastery. However, with the personnel reductions, smaller budgets and the increase of rapid worldwide deployments, Army leaders will no doubt have to adapt better to their environment. Therefore, there will be a necessary shift toward the value orientation of ecological integration.

## Accreditation

There are many approaches to evaluation of higher education curricula; a common approach to institutional evaluation is the system of accreditation for colleges and universities administered by regional associations. This system provides a benchmark for maintaining the integrity of higher education. In the United States there is no centralized federal office that has total control over the educational system. The states assume the bulk of the responsibility in overseeing the conduct of the education of our elementary, middle and high school aged children.

Colleges and universities enjoy broad academic freedom in the manner in which they go about the business of education.

In an effort to maintain a basic level of quality the accreditation process emerged (U.S. Department of Education, 1988, p. 2).

There are nine functions of accreditation:

1. Certifying that an institution has met established standards
2. Assisting prospective students in identifying acceptable institutions
3. Assisting institutions in determining the acceptability of transfer credits
4. Helping to identify institutions and programs for the investment of public and private funds
5. Protecting an institution against harmful internal and external pressures
6. Creating goals for self-improvement of weaker programs and stimulating a general raising of standards among educational institutions
7. Involving the faculty and staff comprehensively in institutional evaluation and planning
8. Establishing criteria for professional certification, licensure, and for upgrading courses offering such preparation; and
9. Providing one of several considerations used as a basis for determining eligibility for Federal assistance. (U.S. Department of Education, 1988, p. 2)

There are six regional institutional accrediting associations within the United States: New England Association of Schools and Colleges, Southern Association of Colleges and Schools, Northwest Association of Schools and Colleges, North Central Association of Colleges and

Schools, Western Association of Schools and Colleges, and the Middle States Association of Colleges and Schools. These regional agencies are responsible for accreditation of the colleges and universities within their geographical regions. The United States Military Academy is located in the Middle States Association of Colleges and Schools region. USMA last underwent the accreditation process in 1989 (Remley, 1992, p. 20).

The types of accreditation fall into two categories: institutional and programmatic (U.S. Department of Education, 1988, p. 3). The institutional accreditation applies to an entire institution and when accredited it meets certain basic standards in all areas. The programmatic accreditation focuses on a specific aspect of the institution.

> Specialized accreditation normally applies to evaluation of programs, departments or schools which usually are parts of a total collegiate or other postsecondary institution. The unit accredited may be as large as a college or school within a university or as small as a curriculum within a discipline. (U.S. Department of Education, 1988, p. 3)

Programmatic evaluation is frequently conducted according to guidelines developed by learned societies or professional associations. In the area of physical education such guidelines have been provided by the

National Association for Sport and Physical Education (NASPE); the accreditation process is conducted by the National Council for the Accreditation of Teacher Education. Since these guidelines are designed to ensure quality preparation for physical education teachers, they are not appropriate for use at USMA where the institutional mission is the preparation of young men and women to serve as officers in the United States Army. Therefore, other approaches to evaluation and improvement of the DPE curriculum must be sought.

## Evaluation of Physical Education Curricula

Educational programs are frequently evaluated in terms of student achievement of the desired outcomes. Every subject-matter area attempts to achieve professional consensus on the most important desired outcomes. Many school programs in physical education are now seeking improvements based on the NASPE guidelines (National Association for Sport and Physical Education, 1992).

Evaluation of student achievement in physical education utilizes a variety of approaches. Students are administered paper and pencil tests to determine knowledge gained about a certain sport, key movement concept, or scientific fundamental principle. These tests may cover use and wear of equipment, dimensions of the playing area, and the rules; test understanding of concepts relating to the biomechanics of movement; or help a child move with

greater creativity. Skills tests are conducted to measure a single skill, several skills combined, and the playing ability of the student (Safrit, 1981, p. 164). "A skill test can be designed to use a measure of time, distance, number of executions in a given time, accuracy, velocity, or form as well as a combination of these measures" (Safrit, 1981, p. 164). Fitness tests are also common in physical education; speed, flexibility, strength, and cardiovascular endurance are the areas most commonly measured.

Pencil and paper tests, skills tests and fitness tests are useful tools for teachers to evaluate the individual student's performance achievement. However, they may not provide the necessary information to determine whether the overall physical education curriculum is meeting its intended outcomes. Safrit (1981, p.277; 1986, p.487) recommends using the Purpose Process Curriculum Framework (PPCF) as a curriculum evaluation instrument. The PPCF is a personal meaning model for physical education developed over several decades by Jewett and her colleagues (Jewett, 1987, p. 198). As a personal meaning model the focus is on the meaning of movement for the individual.

Ennis (1990) analyzed a middle school physical education curriculum through the use of participant perspectives; evaluation instruments were based on the PPCF. The data were collected utilizing five domains: ideological and formal domains, perceived and experiential

domains, and operational domains. Analysis of the ideological and formal domains consisted of an examination of documents. Information about the perceived and experiential domains was gathered through interviews with teachers and students. Classroom observations served as the data source for the operational domain. This study provided a unique look at the content, the providers and the receivers of the curriculum.

In university and college basic physical education program evaluations the survey has been a popular approach. A series of survey studies were conducted by Oxendine (1961, 1969, & 1972), Oxendine and Roberts (1978), and Trimble and Hensley (1984, 1990). They reported information received from administrators and faculty members on ". . . status and practices of general instruction programs of physical education in four-year colleges and universities in the United States" (Trimble & Hensley, 1984, p. 82). A modified questionnaire of that used by Oxendine was developed by Trimble and Hensley to gather information about ". . . availability of basic physical education programs, grading practices, awarding of credit, requirements, elective practices, competency examinations, trends in course offerings, composition of courses, financial support, equipment, adaptive programs, and teaching faculty" (Trimble & Hensley, 1984, p. 82-83). Oxendine had found a steady decline in mandatory physical education programs at the universities and colleges up

through the early seventies, and Trimble and Hensley noted that from 1977 to 1990 the physical education requirements appeared to be stable.

Adams and Brynteson (1992) conducted a survey to gain information about the attitudes of alumni about the impact of their college physical education programs on their current exercise habits. A sample of alumni of four private colleges which had a basic physical education program were sent questionnaires. Of the four colleges three had a mandatory physical education program; the fourth college offered optional physical education. The survey instrument was a questionnaire. The first part requested demographic information such as: year degree earned, undergraduate major, sex, height, weight, weight when the bachelors degree was earned. The second part of the survey requested information about exercise habits, dietary information, and an attitude question about the importance of exercise to maintaining good health. These responses were based on a five point Likert scale, ranging from **very important** to **no importance** and **all of the time** to **never**. The final portion of the questionnaire requested information about activities, distance, duration and number of times participated in during the last three months.

The results of the study indicated that the type and frequency of physical education activity programs offered by universities and colleges can positively influence a

graduate's behavior and attitude toward fitness (Adams & Brynteson, 1992, p. 151).

Brynteson and Adams (1993) conducted a second study in which they compared the exercise attitudes, knowledge, and habits of alumni from the same four colleges with varying degrees of mandatory conceptually based physical education programs (p. 208). They used the same procedures for this study as they did for the 1992 study with the exception that they used different sample populations. The results of their study demonstrated that graduates from institutions with conceptually based physical education programs related that they had more knowledge about fitness and had better attitudes toward fitness activities. However, based on aerobic fitness points, they did not participate in fitness activities to any greater degree than graduates from an activity based program (p. 210).

## Criteria for Curriculum Effectiveness

An impact study or evaluation, is a method commonly used to determine the effectiveness of a program. Holt and Courtenay (1985) suggest that one of the major purposes for conducting an impact study is ". . . to learn from mistakes and make adjustments to improve future programs" (p. 30). "Impact evaluation provides data that indicate whether or not participants learned the concepts, principles, and/or skills, and whether or not they are using them on the job" (Courtenay & Holt, 1990, p. 11).

This research project was essentially an impact study in which the criteria for curriculum effectiveness were based on Kirkpatrick's (1983) four stages of evaluation. The four stages are: reaction, learning, behavior, and results. Reaction was the way a person feels about a program; it was also referred to as "customer satisfaction" (p. 19). The second stage, learning, ". . . refers to the knowledge and skill that were learned and the attitudes that were changed because of the training program" (pp. 19-20). Behavior change was the third step and it was a change that was directly attributed to the training received. The fourth and final step was results. In the business environment effective results would be measured by answering yes to the following questions: "Was productivity increased? Quality improved? Costs reduced? Morale improved? Turnover reduced? Accidents prevented?" (p. 24).

For the purpose of this study, the four criteria of effectiveness are designated as: satisfaction, knowledge, participation, and impact. Curriculum effectiveness is further defined as an evaluation of the extent to which the individual participant derived **satisfaction** from the physical education program, acquired fitness **knowledge** and **skills**, adopted a pattern of regular **participation** in fitness activities, and ultimately, observed a beneficial **impact** on the units to which the individual was assigned.

## Researcher Perspective on the Physical Education Curriculum at USMA

The United States Military Academy undoubtedly has one of the finest, if not the finest, physical education programs in an institution of higher education in the United States. It is a four year program in which all cadets must participate. It encompasses fitness, lifetime sports, scientific foundational knowledge, competition, and coaching. However, one of the most important aspects is that it encourages all cadets to achieve their personal best.

The evaluation of cadets is an ongoing process. Cadets are tested in various physical events on the day they first arrive at USMA. They learn early that performing to the best of their abilities is an important part of cadet life. The overall curriculum is evaluated periodically, as well as when there is an identified need for change. There is no standing curriculum committee; if there is a recognized need for some change, then a committee is appointed to study the situation and offer recommendations.

Undoubtedly, the predominant value orientation of the instructors with the Department of Physical Education (DPE) would be disciplinary mastery. Task, conditions for satisfactory performance, and standard are the three points stressed in almost all classes. It is important to note that safety is an important aspect of many classes and

there are requirements for some skills to be taught under stringent guidelines.

All of the officers within DPE arrive with a master's degree in physical education; however, almost all of the physical education instructors assigned to DPE do not have undergraduate degrees in physical education. There is a great difference in the master's degree programs, and some of the officers have not had the opportunity to instruct in a physical education environment. That being the case, when they arrive at USMA they receive an orientation on what and how to teach. Many of the classes have certain standards which must be met to achieve a certain grade.

Physical fitness in the Army is a daily requirement for all. Soldiers are not always in the best physical condition to be effective in the physically demanding conditions of combat. With the Military Academy releasing approximately one thousand new lieutenants into the Army each year, it is imperative that they arrive in their units with the physical and mental skills necessary to develop soldiers who are physically capable of withstanding the rigors of combat.

## Summary

The purpose of this review of the literature was to identify and describe selected literature in the areas of military education, training, and fitness requirements; to determine changes in the physical education curriculum at

USMA since the arrival of women in 1976; and the requirement for program evaluation using the perspective of former participants.

The review of the literature on the military aspects was very detailed because it was the researcher's intent to ensure that all readers understand fitness in the United States Army as it was in 1993. Additionally, it was necessary to review the current fitness requirements in the United States Army and how they have evolved over time.

The section on the evolution of the physical education program at USMA was guided by the research intent to answer research question one: What are the major changes that have occurred in the curriculum within the Department of Physical Education as a result of the admission of women in 1976? To answer this question, the researcher made a site visit to USMA to conduct research in the Department of Physical Education as well as the Office of Institutional Research and the archives of the USMA Library; a review of primary and secondary source documents (Struna, 1990, pp. 202 & 209) was conducted.

The changes to the physical education curriculum as a result of the admission of women occurred in four areas: Cadet Basic Training (CBT), courses, intramurals and testing. In CBT the changes included: all cadets wearing t-shirts during morning physical training and during mass athletics; women carrying the M-16 rifle (6.5 lbs) instead

of the heavier M-14 rifle (13 lbs); interval training was implemented to improve running; and fewer hills were run.

Self Defense I and Self Defense II were added for the women in lieu of the required wrestling and boxing classes taken by the men. In gymnastics (another required course), the parallel bars and high bar were replaced by the balance beam and uneven bars for women cadets.

In the intramural program, women were not assigned in any capacity to football, boxing, wrestling, or lacrosse.

After conducting tests to determine the capabilities of women, adjustments in grading, performance, and testing standards were made for women. In the Indoor Obstacle Course Test which relied heavily on upper body strength, the parallel bar walk was eliminated for both men and women. The parallel bars were replaced by agility events, the balance beam walk and tire run.

The addition of the Master Fitness Trainer program to the physical education program in 1987 was significant. However, it was not added because of the women; it was included to provide the Army with leaders who are well educated and trained in the most current personal and unit fitness principles and practices.

In conclusion, a number of studies have been conducted in physical education on program evaluation. The United States Military Academy has done follow-up studies of graduates, but none have provided indepth information about the physical education program. The studies on basic

physical education have not focused on the effectiveness of the programs. The present study was designed to gain such insight.

# Chapter 3

# PROCEDURES

The purpose of this study was to examine the effectiveness of the physical education curriculum of the United States Military Academy in the preparation of women graduates for their role as Army officers and leaders. The procedures included historical research, development of an instrument to determine the effectiveness of the program, a pilot study of the instrument, administration of the instrument, analysis of the data, and follow-up telephone interviews. The research design was mixed with both quantitative and qualitative methodologies.

## Preliminary Data Collection

Lieutenant General Howard D. Graves, Superintendent of the United States Military Academy, was contacted by the researcher in writing in March 1992 (Appendix A) to request permission to conduct research on the curriculum in the Department of Physical Education. A letter dated April 1, 1992, (Appendix B) granting approval to conduct the research was received from Colonel Patrick A. Toffler, the Director of Institutional Research at the United States Military Academy.

In July 1992, the researcher traveled to the Military Academy to review and make copies of original documents and to obtain the addresses of the women graduates identified for the study.

To answer Research Question One, primary and secondary source historical documents and testing data within the Department of Physical Education at the United States Military Academy were reviewed. Additionally, relevant files of the Office of Institutional Research, and the archives in the USMA Library were examined.

Data for answering Research Question Two were responses from a questionnaire. The following sections discuss the procedures used in the collection of the data.

## Subjects

The subjects who participated in this study were women graduates of the United States Military Academy from the classes of 1980, 1985, and 1990. These three classes were selected because the class of 1980 represents the very first class of women graduates, and the classes of 1985 and 1990 are subsequent classes which graduated at five year intervals. The intention was to select classes that are spaced so that if there were any differences over the ten-year period they would be illustrated. A total of 271 women graduates were contacted by mail and asked to complete a three-part questionnaire which had been assembled by the researcher. The total number of women

graduates surveyed for this study represent all of the women graduates of the three classes selected. Of the 271 women graduates asked to complete the questionnaire, 185 responded to the request, producing 185 completed and usable instruments.

## Development of the Instrument

The research instrument, Questionnaire on the Department of Physical Education Curriculum at the United States Military Academy: Women Graduates from the Classes of 1980, 1985 and 1990, is shown in Appendix C. It was designed by the researcher as a result of a review of the literature and personal and professional experience. The questionnaire had three parts.

Part I of the instrument had seven questions which were developed to gain demographic information about the subjects.

Part II of the instrument had ten questions. Eight of the questions had four possible responses which were based on the Likert scale; one question had a dichotomous response; and one question was left open-ended. The focus of these questions was on the effectiveness of the curriculum, focusing on the satisfaction derived from the program, acquired fitness knowledge and skills, regular participation in physical activities, and beneficial impact to the units.

Part III of the instrument included seven questions. These questions were developed by the researcher and framed as open-ended questions designed to elicit participant responses in writing. The original questions were asked of four Military Academy graduates; based on their responses revisions to the questions were made. The questionnaire was also reviewed by the staff at the University of Georgia's Survey Research Center.

## Pilot Study

A pilot study of the instrument was conducted in June 1993. Fifty percent (n=31) of the women graduates from the United States Military Academy class of 1983 were randomly selected, using a table of random digits (Moore & McCabe, 1989, Table B), to receive the instrument. The same mailing procedures planned for the research study were used. Of the 31 questionnaires mailed, 27 were returned for an 87% response rate. The purposes of the pilot study were: 1) to determine whether the questions were clear, 2) to determine whether the responses were likely to provide answers to the research questions, 3) to ascertain the length of time required to complete the questionnaire, 4) to test the procedures for administering the questionnaire, and 5) to practice the data analysis procedures.

After all of the instruments had been returned and analyzed some minor modifications were made to the

instrument. All questions were determined to be clear, as no subjects stated that anything was unclear or confusing. The responses to the questions appeared to answer the research questions. It was determined that the questionnaire would take approximately twenty minutes to complete. The mailing and tracking procedures used were effective; no changes were made for the final study. The quantitative data were analyzed at the University of Georgia Educational Research Laboratory.

The qualitative data were analyzed by the researcher. The core category was effectiveness. Content analysis was conducted and frequency counts were determined using the themes of program satisfaction, acquired fitness knowledge and skills learned, regular participation in physical activities, and beneficial impact on unit. It was concluded that the content analysis technique would be the best method to evaluate the written responses.

The only written change made to the instrument was the addition of National Guard and Individual Ready Reserve as responses to question 2. Additionally, all item responses were placed vertically instead of horizontally to improve the visual flow of the instrument.

## Administration of the Instrument

In August 1993, the instrument was mailed to 271 women graduates from the classes of 1980, 1985, and 1990. The

book Mail and Telephone Surveys: The Total Design Method (Dillman, 1978), was used as a basic guide for the administration of the questionnaire. The cover letter (Appendix D) was carefully written; it provided relevant information about the researcher, the study, and the potential importance and usefulness of the study. Confidentiality was promised, and the reason for the code numbers was explained. Each cover letter was hand addressed and signed using a blue ink pen.

The questionnaires were folded into three parts with the top part of the questionnaire visible. The cover letter was also folded in thirds over the questionnaire. When the cover letter was opened the questionnaire was seen. First class mail was used to indicate the importance of the contents and to ensure that the letter would be forwarded if the subject had moved or it would be returned if for some reason it was undeliverable. Enclosed with the instrument was a self-addressed, stamped return envelope and a 3x5 card with which the participant could volunteer to be interviewed by telephone.

One week after the initial mailing a letter (Appendix E) was mailed to all participants reminding them to complete the instrument and thanking them if they had already responded. This follow-up letter was also hand signed in blue ink. Six weeks after the initial mailing a second follow-up was mailed to all nonrespondents. This

mailing contained a cover letter (Appendix F), another copy of the questionnaire, and a self-addressed stamped envelope.

There were 102 instruments returned from the Post Office because of incorrect addresses. The names of 41 graduates who were still thought to be on active duty were mailed to a contact person at the Personnel Center in Alexandria, VA. Updated addresses were received for ten of these women officers; the instrument was mailed promptly to the corrected addresses. The reminder letters were mailed one week later. The mailing procedures to the corrected addresses were similar to that of the initial mailing. The return rate for the mailing to the corrected addresses was 6 instruments returned or 2% of the mailout.

After the mailings to corrected addresses, the overall return rate from the women graduates was 68% or 185 out of 271. The response rate for the classes was: class of 1980, 52 surveys returned for a response rate of 81%; class of 1985, 80 surveys returned for a 69% response rate; and the class of 1990 returned 55 surveys for a 59% response rate.

Forty of the subjects never received a copy of the survey instrument because of incorrect addresses. In the final analysis the response rate of the women graduates who actually received the survey was 80%.

## Analysis of the Questionnaire Data

After all of the data had been collected, the forced choice items and items requesting a numerical response were coded by the researcher into a computer. The analysis of the data was run by the Educational Research Laboratory at the University of Georgia. Descriptive statistics were used.

Responses to the structured open-ended questions were analyzed by the researcher using content analysis (Holsti, 1969; Guba and Lincoln, 1981, p. 240; Patton, 1990, p. 381). Frequency counts were conducted on the responses to items 18, 19, and 22, which requested that activities be listed.

The structured open-ended questions 21 and 22 were analyzed using content analysis. The following rules were established by the researcher: a) become familiar with all of the data by reading through it several times, b) code one question at a time, c) read through the responses to determine whether each is a positive or negative comment, d) use a single sentence as the unit of analysis, e) code all responses from one class prior to moving to the next class, f) reduce emic responses (words of the participant) into themes, g) organize similar themes together, h) collapse similar themes into meaningful categories. An example of coding is in Appendix G and a code sheet is in Appendix H.

## Follow-up Interviews

After all of the questionnaire data analysis had been completed 13 women graduates who had volunteered were interviewed telephonically in February 1994 (class of 1980 n=4, class of 1985 n=5, and class of 1990 n=4). The telephone interviews were conducted primarily to probe for additional information on particular research questions.

Participants were notified of their rights as human subjects. Additionally, they were mailed two copies of an approved consent form and asked to sign and return one copy to the researcher.

A written transcript was read which included some analysis results tailored to the class of the participant being interviewed.

Questions were asked in the areas of: importance of physical education for officer role; standards of the cadet physical fitness test; eating disorders; and attitudes of the Department of Physical Education instructors.

## Biases and Expectations

The researcher conducting research that has a qualitative aspect had an important responsibility to help the reader to understand the researcher's personal biases and expectations when the research began.

The researcher received a direct commission into the United States Army in 1976. She was an instructor at the

United States Military Academy for two years from 1986 to 1988. Some of the women from the class of 1990 had the researcher as an instructor and guidance officer. Additionally, she had worked with many of the women surveyed for this research. The researcher did not anticipate any problems because of this past contact.

As a result of her experience at USMA the researcher had a great deal of respect for the women who have graduated from the Military Academy. It was expected that the women who received the questionnaire would respond honestly and in a timely manner. It was anticipated that the response rate of the women graduates would be high because the researcher is also a woman officer. Hopefully, the respondents honestly believed that the researcher was sincere and that she might be able to make a difference in future physical education curriculum development at USMA.

# Chapter 4

## ANALYSIS AND DISCUSSION OF DATA

The purpose of this research was to examine the effectiveness of the physical education curriculum of the United States Military Academy (USMA) in the preparation of women graduates for their role as Army officers and leaders.

Research question one asked: What major changes have occurred in the curriculum within the Department of Physical Education as a result of the admission of women in 1976? Historical research using primary and secondary sources was conducted to determine the answer. A thorough discussion of the United States Military Academy physical education curriculum and the changes in the program because of the inclusion of women cadets was presented in Chapter 2. The changes which resulted because of the admission of women occurred in the following four areas: Cadet Basic Training (CBT), physical education courses, the intramural program, and testing standards.

In CBT the changes included: all cadets wearing t-shirts during morning physical training and during mass athletics; women carried the lighter M-16 rifle (6.5 lbs) in lieu of the M-14 rifle (13 lbs); interval training was

instituted to improve running; and fewer hills were incorporated into the runs.

In the area of courses, Self Defense I and Self Defense II were added for the women; these courses were in place of wrestling and boxing which were required courses for the men. The parallel bars and high bar in gymnastics were replaced by the uneven bars and balance beam for the women cadets.

Women were not allowed to participate in any capacity in contact intramural sports. These sports included: boxing, wrestling, lacrosse, and football.

Studies were conducted to determine the physical capabilities of women; after the studies were completed testing standards were established for women cadets. A fitness test which changed because of women cadets was the Indoor Obstacle Course Test. The parallel bar walk, an upper-body strength event, was eliminated; it was replaced by the balance beam walk and tire run, balance and agility events.

Research question two was stated as follows: What are the perceptions of the women graduates in the classes of 1980, 1985, and 1990 concerning the USMA physical education curriculum and the related experiences encountered in preparation for their role as Army officers and leaders?

A questionnaire on the Department of Physical Education Curriculum at the United States Military Academy was mailed to 271 women graduates. One hundred eighty-five

women graduates in the classes of 1980, 1985, and 1990 provided data for this study by completing the questionnaire. Complete demographic information for this group of West Point graduates can be found in Table 4. Information on rank and branch assignments is provided in Table 5.

The quantitative statistical analysis was performed by the Educational Research Laboratory located at the University of Georgia, Athens, Georgia, using Statistical Package for the Social Sciences (SPSS-X) and Statistical Analysis System. Qualitative analysis was conducted on questions 20 and 21 using content analysis (Holsti, 1969; Guba and Lincoln, 1981; Patton, 1990).

Each of the three classes is discussed separately below to highlight the categories which emerged from their responses. A concluding summary is provided to discuss the similarities and differences between the three classes.

## Class of 1980

Commencement ceremonies for the West Point Class of 1980 were conducted at the United States Military Academy on 27 May 1980. The graduation address was given by The Honorable Harold Brown, Secretary of Defense. Sixty-two of the graduating seniors were women. The class of 1980 was the first to have women among its ranks.

Table 4

Demographic Information of Women Graduates of USMA by Class

| | 1980 | 1985 | 1990 |
|---|---|---|---|
| 1. Number of Participants | 50 | 80 | 55 |
| 2. Current Status | | | |
| Active Duty | 19 | 36 | 48 |
| Active Reservist | 6 | 4 | 1 |
| National Guard | 0 | 0 | 0 |
| Civilian | 18 | 21 | 3 |
| Individual Ready Reserve | 6 | 19 | 3 |
| Retired (Medical) | 1 | 0 | 0 |
| 3. Age | | | |
| 24-28 | | | 55 |
| 29-33 | | 80 | |
| 34-38 | 50 | | |
| 4. Married | | | |
| Yes | 33 | 57 | 28 |
| No | 17 | 23 | 27 |
| 5. Married to service member | | | |
| Yes | 17 | 40 | 24 |
| No | 16 | 17 | 4 |
| 6. Year Resigned | | | |
| 1983 | 1 | 0 | 0 |
| 1984 | 0 | 0 | 0 |
| 1985 | 14 | 0 | 0 |
| 1986 | 7 | 0 | 0 |
| 1987 | 4 | 2 | 0 |
| 1988 | 2 | 1 | 0 |
| 1989 | 0 | 5 | 0 |
| 1990 | 0 | 20 | 0 |
| 1991 | 1 | 12 | 0 |
| 1992 | 1 | 4 | 1 |
| 1993 | 1 | 0 | 6 |

Table 5

Rank and Branch Assignments by Class

| | 1980 | 1985 | 1990 |
|---|---|---|---|
| **Rank** | | | |
| Major | 26 | 0 | 0 |
| Captain | 0 | 38 | 0 |
| First Lieutenant | 0 | 0 | 49 |
| **Branch Assignments** | | | |
| Adjutant General | 0 | 0 | 1 |
| Air Defense Artillery | 3 | 0 | 1 |
| Aviation | 1 | 3 | 2 |
| Chemical | 0 | 0 | 1 |
| Engineer | 4 | 1 | 4 |
| Field Artillery | 2 | 0 | 0 |
| Judge Advocate General | 1 | 1 | 0 |
| Medical Corps | 1 | 0 | 0 |
| Military Intelligence | 3 | 4 | 11 |
| Military Police | 1 | 5 | 4 |
| Ordnance | 2 | 8 | 6 |
| Quartermaster | 5 | 4 | 5 |
| Signal | 2 | 7 | 7 |
| Transportation | 1 | 3 | 5 |
| Air Force | 0 | 1 | 0 |

Demographics

Fifty or 81% of the women who graduated in that first class participated in this research. Table 4 (p. 88) illustrates the current status of those women today. Of the 50 respondents, 19 or 38% are still on active duty in the United States Army; six are in the Active Reserve; 18 are civilians; six are in the Individual Ready Reserve, and one was medically retired. Their ages range from 34 to 38 with a mean age of 35 years. Sixty-six percent or 33 are married; 17 of the 33 are married to service members.

Women from the class of 1980 resigned from the active Army in 1983 through 1993. The largest number resigned in 1985, with 14 resigning that year. The graduates of USMA are required to serve a five year commitment upon graduation. Therefore, 1985 is the first year they were eligible to resign, making it the year in which most of the resignations occurred. Reasons for resigning were not asked, nor were they given. The reason why one of these women was allowed to resign in 1983 is unknown.

Table 5 (p. 89) depicts the current rank and branch assignments. The current rank of those still on active duty or in the active reserve is Major. These women are in 12 different branches, the largest number (5) are in the Quartermaster Corps, followed by the Engineer Corps with four, and three women in the branches of Air Defense Artillery and Military Intelligence. There are two women each in Field Artillery, Ordnance, and Signal and one woman

each in Aviation, Judge Advocate General, Medical Corps, Military Police, and the Transportation Corps.

The women who are still in the active reserve or on active duty reported the type of unit to which they are currently assigned (Table 6) and their job title (Table 7). Officers who have attained the rank of Major are referred to as field grade officers. The field grade ranks (major, lieutenant colonel and colonel) are in positions of increasing responsibility. They are primary staff officers and serve at higher staff levels. The types of units to which these women are assigned reflect a normal career progression. These women are serving in positions at Army staff, joint commands, major command staffs, division staff, brigade staff, and battalion staff. They are also serving with a community hospital, at the United States Military Academy, and as students at military schools for advanced training.

The job titles reported in Table 7 are typical for the rank of major. Action officer, staff officer, commander, defense counsel, doctor, and student are job titles which are compatible with the types of units to which these women are assigned.

Physical Activity Prior to Attending USMA

These women as a group reported themselves as being fairly physically active prior to entering the U. S. Military Academy. Forty-six or 92% were physically active

Table 6

Current Unit Assignments: Class of 1980

| Type Unit |
|---|
| Army Staff |
| Deputy Chief of Staff for Logistics |
| Personnel Command |
| Joint Command Staff |
| Air Force |
| Operation Provide Promise, Zagreb, Croatia |
| Transportation Division |
| Major Command Staff |
| United States Army Pacific |
| United States Forces Korea |
| Division Staff |
| Brigade Staff |
| Battalion Staff |
| Community Hospital |
| United States Military Academy Staff and Faculty |
| Military School Students |
| Command and General Staff College |
| School of Advanced Military Studies |

Table 7

Job Titles: Class of 1980

| Job Title |
|---|
| Action Officer |
| Battalion S3 - Plans, Operations, & Training |
| Brigade S3 - Plans, Operations & Training |
| Chief, Admissions Branch, Operations |
| Chief, Internal Medicine |
| Command and General Staff Officer Instructor (Reserve) |
| Command and General Staff Officer Student |
| Commander |
| Deputy Chief of Intelligence Section |
| Deputy Chief of Staff Engineers, Chief Military Division |
| Deputy Inspector General |
| G4 - Logistics/Plans Officer |
| Group S4 - Logistics |
| J1 - Personnel/Plans Officer |
| Lieutenant Colonel Assignments Officer |
| Senior Defense Counsel |
| Surface to Air Missile Coordinator |
| United States Military Academy Liaison Officer |

prior to entering USMA. When asked the types of physical activities they engaged in prior to entering USMA 30 different activities were listed. Some respondents participated in one activity, while four reported participating in six; two participated in seven different activities and one subject participated in eight different physical activities. Four individuals reported that they did not participate in any physical activities prior to entering USMA. Table 8 illustrates the types of activities in which these women took part.

Track was the activity of choice; 22 or 44% of these women participated in track prior to entering USMA. The second most popular activity was basketball with 19 participants, followed by 18 in swimming; 13 softball, 12 volleyball, 11 tennis and 10 running. Seven women were gymnasts, five ran cross country, and four reported participating in biking and field hockey. There were three each in the sports of hiking, horseback riding, ice skating, racquetball, and skiing. Bowling, cheerleading, karate, soccer, and synchronized swimming had two participants each. Ballet, boy's cross country, calisthenics, dance, farm work, flag football, high kick squad, walking, and weight lifting were each reported by one participant.

Table 8

Activity Participation Prior to Entering USMA: Class of 1980

| Activity | Number |
|---|---|
| Track | 22 |
| Basketball | 19 |
| Swimming | 18 |
| Softball | 13 |
| Volleyball | 12 |
| Tennis | 11 |
| Running | 10 |
| Gymnastics | 7 |
| Cross Country | 5 |
| Biking | 4 |
| Field Hockey | 4 |
| Hiking | 3 |
| Horseback Riding | 3 |
| Ice Skating | 3 |
| Racquetball | 3 |
| Skiing | 3 |
| Bowling | 2 |
| Cheerleading | 2 |
| Karate | 2 |
| Soccer | 2 |
| Synchronized Swimming | 2 |
| Ballet | 1 |
| Boy's Cross Country | 1 |
| Calisthenics | 1 |
| Dance | 1 |
| Farm Work | 1 |
| Flag Football | 1 |
| High Kick Squad | 1 |
| Walking | 1 |
| Weight Lifting | 1 |
| None | 4 |

Corps Squad, Intramural and Club Sport Participation

All cadets must participate in corps squad, intramural or club sports each year. The participation opportunities are numerous. Additionally, cadets can earn corps squad, intramural and club sport credit by serving in a variety of positions. These positions may include: participant, team manager, coach, or official.

Table 9 shows the corps squad participation level for various sports. The most popular sport was softball with nine participants, followed by basketball with eight. Swimming had seven, Rabble Rouser (cheerleader) and volleyball had five each, track four, and cross country three participants. Tennis had two. There was one participant each in gymnastics, parachute team, rifle, and skiing.

In intramural sport participation (Table 10) the largest number participated in soccer with 15. Track followed with 11. Flickerball and swimming had 10 each; volleyball nine, triathlon six, and cross country and handball four each. Three reported participating in squash. There were two each in basketball, racquetball, and softball. Gymnastics, Sandhurst, team handball, and touch football had one each.

The participants reported taking part in 20 different club sport programs (Table 11). Team handball had the most participants with 10, followed by lacrosse with six, gymnastics with five and bowling and softball with four

Table 9

Corps Squad Participation: Class of 1980

| Corps Squad | Number Participated |
|---|---|
| Softball | 9 |
| Basketball | 8 |
| Swimming | 7 |
| Rabble Rouser[1] | 5 |
| Volleyball | 5 |
| Track | 4 |
| Cross Country | 3 |
| Tennis | 2 |
| Gymnastics | 1 |
| Parachute Team | 1 |
| Rifle Team | 1 |
| Skiing | 1 |

[1] Rabble Rouser is a cheerleader.

Table 10

Intramural Sport Participation: Class of 1980

| Intramural Sport | Number Participated |
|---|---|
| Soccer | 15 |
| Track | 11 |
| Flickerball | 10 |
| Swimming | 10 |
| Volleyball | 9 |
| Triathlon | 6 |
| Cross Country | 4 |
| Handball | 4 |
| Squash | 3 |
| Basketball | 2 |
| Racquetball | 2 |
| Softball | 2 |
| Gymnastics | 1 |
| Sandhurst[1] | 1 |
| Team Handball | 1 |
| Touch Football | 1 |

[1] Sandhurst is a military sweepstakes competition.

Table 11

Club Sport Participation: Class of 1980

| Club Sport | Number Participated |
|---|---|
| Team Handball | 10 |
| Lacrosse | 6 |
| Gymnastics | 5 |
| Bowling | 4 |
| Softball | 4 |
| Cycling | 3 |
| Marathon | 3 |
| Orienteering | 3 |
| Track | 3 |
| Basketball | 2 |
| Equestrian | 2 |
| Skiing | 2 |
| Tennis | 2 |
| Triathlon | 2 |
| Cross Country Running | 1 |
| Judo | 1 |
| Sailing | 1 |
| Skydiving | 1 |
| Volleyball | 1 |

each. There were three each who participated in cycling, marathon, orienteering, Rabble Rouser, and track. Basketball, equestrian, skiing, tennis, and triathlon had two each. There was one participant each in cross country running, judo, sailing, skydiving, and volleyball.

## Perceptions of Physical Education Curriculum Impact on Officer Role

Question 20 of the survey asked: What experiences in physical education at USMA have impacted on your role as an Army officer? Forty-eight of those surveyed responded; of those, 34 of the comments were positive and nine were negative, with four indicating that USMA physical education had no impact on their role as an officer and one noting that the question was not applicable. The categories that came through the strongest were those of increased self-confidence, hard work and discipline; excelling physically; credibility; and being a role model. The respondents were very much aware of the importance of their physical performance in being an Army officer.

Self-confidence, hard work and discipline. Twenty-three of the respondents discussed the self-confidence and self discipline they now possess as a result of their physical education experience. These traits have impacted on their role as an Army Officer. The following are typical of their responses:

The ability not to give up. When I first saw the IOCT I could hardly do any of the events. I just kept practicing. Years later at Ft. Hood before I tried out for the Air Assault Course I again had to practice an OC (outside) to be able to complete the requirements. It was the resolve that even though I was terrified I still could complete the tasks.

I learned to dig deep within.

Having to start from scratch and never having it "easy" in the PE area (the IOCT comes to mind) but always seeing the results of hard work and perseverance was vital to my Army experience - never give up.

The requirements gave me confidence in my ability to meet other physical challenges I encountered in the Army.

Self-defense courses, as well as others, provided necessary <u>self-confidence</u>. "<u>Team work</u>" through group sports. Healthy <u>competition</u>.

Patience and discipline.

> Greater dedication and self-esteem.
>
> Gave me confidence.
>
> Gymnastics, swimming, and self-defense were all a challenge to me, so they helped in my self-discipline and perseverance which I tried to instill in my soldiers.

Excelling physically. Another area which the respondents discussed was excelling physically. Seventeen of the women discussed some aspect of their physical performance. Many mentioned that the tough standards at USMA resulted in their excelling physically in the Army. This was often used to underscore a statement.

> I graduated #1 in PE, so I always max the PT test.
>
> Fortunately, I was blessed with the ability to run.
>
> My physical education experience at the Academy was largely negative - however, while on active duty my "poor athletic abilities" somehow transformed into being among the best in comparison to other officers and enlisted soldiers.

> I always maxed the PT test, even though I was a poor runner at school.
>
> The greatest impact would have been setting and sometimes shattering personal goals.
>
> I always passed the IOCT and APFT, but had extreme difficulty passing the 2 mile run. However, while on active duty my failing West Point score on the run enabled me to "max" it according to the Army standards.
>
> As an Army officer, I was able to run faster and farther than most other soldiers.
>
> I could keep up with a unit that ran many miles and many hills.

Credibility. The first impression which an officer makes with her soldiers is often at an early morning physical fitness training formation. Twelve of the respondents discussed the importance of physical prowess in establishing credibility with their soldiers. Again, the awareness of their physical performance and its importance comes through very strongly.

> The first (and a very lasting) impression you make with your soldiers is your performance during morning PT. I realized this during the

first day of Beast Barracks PT. If you can't run you better learn how.

I could run well, so the men in my unit were impressed.

Running was/is important in the Army. Greatly builds credibility for a female officer.

. . . when I was a LT and being physically fit helped me establish myself.

Fortunately, the standards at West Point were so high, that upon integration into the Army, I was "head and shoulders" above most officers. This immediately gave me "idiosyncratic points."

Role model. The importance of setting the example and being a role model for soldiers was discussed by five of the respondents.

When I led PT while in the Army, it was very important that I was physically fit, since I felt I was serving as a role model for my soldiers.

West Point helped me to get into good physical condition which in turn helped me to set a good example of physical fitness in the Army.

Role modeled fitness for my soldiers. Was able to set a good example for my troops - do as I do vs. do as I say.

Input and impact on unit physical training. One of the most important aspects of a soldier's job is preparing for war. Physical trai ing is one facet of that preparation. West Point cadets are prepared to train soldiers in the area of physical fitness. When these graduates were asked if they felt they received enough information/knowledge about fitness while at USMA (question 9), 75% strongly agreed or agreed and 25% disagreed.

Forty percent reported always or often providing input for their unit physical training program (question 11), and 60% reported that they seldom or never provide any input. Thirteen of the 15 women who do provide some type of input strongly agree or agree that they have a positive impact on the unit's physical training program (question 12). The remaining two believe they do not have any impact on their unit's physical training program.

Physical training during deployment. In August 1990 then President George Bush, the Commander in Chief, deployed soldiers to Southwest Asia (SWA) in support of Operation Desert Shield. Three of the women from the class of 1980 reported that they deployed to SWA (question 13), all three felt that they were in good physical condition prior to deployment (question 14), and all three agreed that physical conditioning played an important part in

their deployment (question 15). When asked if they were able to maintain their physical fitness during deployment (question 16) two disagreed, and one strongly disagreed. These three women reported what they did in an attempt to maintain their physical fitness (question 17).

> Long hours left no time and no facilities to do so. I was always away from the health club, pool and nautilus.

> Only during the last month when we got to a hardstand airfield, was I able to do some running and stretching. Shower facilities were poor and it was difficult to keep clean, which impeded my PT schedule.

> I did push-ups and sit-ups in my tent. I got to run during the redeployment phase only.

Perceptions of Physical Education Curriculum Impact on Current Values, Beliefs and Behaviors

The respondents reported current beliefs in the value of personal fitness, benefits of fitness, increased self-confidence, teamwork, commitment to exercise, a belief in high standards, continuing active participation in physical activity, and the maintenance of exemplary fitness test scores.

Value of personal fitness. When asked if they believe that being in good physical condition is an important part of being a soldier (question 8) the responses were unanimously positive. Given a four point Likert scale ranging from strongly agree to strongly disagree, 70% (n=35) strongly agreed and 30% (n=15) agreed.

Question 10 asked if their interest in personal fitness had increased since graduation. Seventy-five percent (n=37) strongly agreed or agreed and 25% (n=12) either disagreed or strongly disagreed.

Question 21 asked: What values, beliefs or behavior changes do you carry with you today as a result of your physical education experience at USMA? The majority of the responses to this question were positive. Thirty-three of the respondents had positive remarks, with 12 making negative comments, two said there were none, one stated not because of USMA, and two did not respond to the question. Benefits of fitness, increased self-confidence, team work, personal commitment to exercise, and the importance of high standards were the categories which emerged from the data.

Benefits of fitness. The theme that was mentioned most frequently was the benefits of fitness. Nineteen (38%) of the women made comments about the value of fitness.

> I truly believe the better condition you are in physically, as well as mentally, determines your

success in dealing with all life situations. Great stress reliever!

I believe staying physically fit is extremely important, and West Point had a lot to do with that attitude.

Need to maintain level of physical fitness- health habits and lifestyle impact.

I use exercise, especially swimming, to relieve stress.

Physical fitness is a critical element of good health and stamina. My experience at West Point got me "hooked" to always maintain a physical fitness program.

I continue to place a value on fitness as a result I try to incorporate at least a minimum level of fitness activity into my busy civilian career.

West Point taught me how to exercise and that it should be part of my daily routine. It showed me the mental and physical benefits of exercise.

Increased self-confidence. As in their responses to question 20 these women mentioned that as a result of their USMA physical education experience they developed an increase in self-confidence.

> I learned to "run like a man" while at West Point.

> Confidence and discipline and a "never quit" attitude helped me make it to graduation (and through 13 years in the Army).

Importance of teamwork. Six women commented on the importance of teamwork; for some, this behavior has carried over into their civilian careers.

> I learned team behavior which has helped me in business.

> Teamwork and positive encouragement are essential.

> Importance of bonding with women, which only happened while at West Point when I was a member of all-women sports teams.

Personal commitment to exercise. When discussing this question their personal commitment to a regular activity program was noted repeatedly; 12 of these women discussed their own physical activities.

> I continue to keep active on a regular basis. I enjoy participating in activities outdoors and believe that learning to keep in shape while at USMA contributed to this enjoyment.

> I try to run 6 or 7 times a week. I also walk and bike to keep in shape.

High standards. The grading standards established for the cadets within the Department of Physical education are high and six graduates viewed this as positive while one respondent saw it as negative. The positive comments centered around an awareness of their physical performance and the importance of high standards.

> West Point pushed me and made me prove to myself that my physical abilities surpassed what my brain thought I could do.

> I strive to do my best whether it's a diagnostic APFT, unit PT or APFT. I believe USMA developed that competition and pride to do more than the minimums.

Current participation in physical activity. The women graduates from the class of 1980 carry over many values and beliefs because of their physical education experience at USMA. They also carry over a significant behavior change. Forty-nine responded to the question: what types of physical activities do you engage in today as a result of

your physical education experience at USMA (question 22). Thirty-eight or 76% reported that they participate in some type of physical activity today because of their physical education experience at West Point. Eleven or 22% of them reported that their participation in physical activities is not a result of their USMA experience, and one participant did not respond to the question.

Table 12 illustrates the types of physical activities and the number of women who participate in that particular activity. Twenty-six different activities are listed. The most frequently reported activity was running, with 26 or 52% participating. Cycling is the second most preferred activity, with 10 (20%) of the respondents engaging in this activity. Nine of the women from the class of 1980 take part in downhill skiing and swimming. The fifth most common activities are aerobics and weight lifting, with eight participants each. Walking, hiking, tennis, and nautilus followed with seven, six, five and three respectively. Basketball, rowing, and volleyball had two each. The following activities had one each: bowling, cross country skiing, figure skating, golf, Nordic Track, push-ups, racquetball, rugby, sit-ups, soccer, softball, squash, and team handball.

Question 24a and 24b asked how many days each week they work out and how long each session lasts. Of the 50 respondents 49 or 98% work out regularly. It is interesting to note that four of these women were not active prior to

Table 12

Current Activity Participation: Class of 1980

| Activity | Number |
|---|---|
| Running | 26 |
| Cycling | 10 |
| Downhill Skiing | 9 |
| Swimming | 9 |
| Aerobics | 8 |
| Weight Lifting | 8 |
| Walking | 7 |
| Hiking | 6 |
| Tennis | 5 |
| Nautilus | 3 |
| Basketball | 2 |
| Rowing | 2 |
| Volleyball | 2 |
| Bowling | 1 |
| Cross Country Skiing | 1 |
| Figure Skating | 1 |
| Golf | 1 |
| Nordic Track | 1 |
| Push-ups | 1 |
| Racquetball | 1 |
| Rugby | 1 |
| Sit-ups | 1 |
| Soccer | 1 |
| Softball | 1 |
| Squash | 1 |
| Team Handball | 1 |
| None as a result of USMA experience | 11 |
| No Response | 1 |

entering the Military Academy. Table 13 displays the number of days these women work out. The amount of time each session lasts is shown in Table 14.

The amount of time these women engage in physical activity varies. On the low end of the scale one respondent participates in physical activities once a week and on the high end seven or 14% work out seven days each week. The mean number of days these women workout is 4.38 days, and the mode was 3 days as reported by 12 of the subjects. The duration of each workout session also varied. The range was from a minimum of 20 minutes to a maximum of 135 minutes. The average amount of time these women spend in a single workout session is 52.44 minutes. The most frequently reported amount of time spent was 60 minutes as reported by nine or 18% of the women. For the women in the class of 1980 the average work out is 4.38 days per week for 52.44 minutes per session.

Current fitness levels. The impact of the West Point experience on maintaining physical fitness was further demonstrated by those women still on active status in maintaining high standards in regular administration of the Army Physical Fitness Test (APFT). The maximum score attainable on the APFT is three hundred. Table 15 shows the performance of these women on their most recent APFT as reported by individual participants. The minimum score was 245 and the maximum was 300. The mean APFT score for these women was 287.23. The most frequently occurring score was

Table 13

Current Work Out Frequency: Class of 1980

| Number of Days | Participants | Percent |
|---|---|---|
| 1 | 1 | 2.0 |
| 2 | 3 | 6.1 |
| 3 | 12 | 24.5 |
| 4 | 11 | 22.4 |
| 5 | 11 | 22.4 |
| 6 | 4 | 8.2 |
| 7 | 7 | 14.3 |

Table 14

Duration of Each Current Work Out Session: Class of 1980

| Minutes | Participants | Percent |
|---|---|---|
| 20 | 2 | 4.1 |
| 25 | 1 | 2.0 |
| 30 | 7 | 14.3 |
| 35 | 4 | 8.2 |
| 40 | 5 | 10.2 |
| 45 | 5 | 10.2 |
| 50 | 3 | 6.1 |
| 55 | 2 | 4.1 |
| 60 | 9 | 18.4 |
| 70 | 1 | 2.0 |
| 75 | 5 | 10.2 |
| 80 | 1 | 2.0 |
| 90 | 3 | 6.1 |
| 135 | 1 | 2.0 |

Table 15

Army Physical Fitness Test Scores: Class of 1980

| Most Recent Score | Frequency |
|---|---|
| 245 | 1 |
| 265 | 1 |
| 270 | 1 |
| 273 | 1 |
| 278 | 1 |
| 282 | 1 |
| 283 | 1 |
| 285 | 1 |
| 286 | 1 |
| 290 | 1 |
| 292 | 1 |
| 293 | 1 |
| 294 | 1 |
| 296 | 1 |
| 300 | 7 |

300, with seven or 33% of the women who still take the APFT receiving a maximum score.

Negative Perceptions of the USMA Physical Education Curriculum

There were two questions (20 & 21), in which the participants had the opportunity to provide open, unstructured responses. Those questions were evaluated on the nature of the response, the response being either negative or positive. Twenty-one of the comments in these two questions were negative in nature, accounting for 21% of the 98 comments.

Some of the respondents reported negative experiences in physical education while they were cadets. As a result some of them do not engage in specific activities or are reluctant to participate with others.

> I don't play racquet sports (I nearly failed squash).

> I was not a good runner. I was so humiliated by morning runs that I will not now run with a group, or even a single companion, even though I run 4-6 times per week.

> I never did learn to do pull-ups because I was embarrassed. Now I can do eight because I've overcome all the negative feelings.

> Still hate running in general and its use of determining how physically fit you are.

The number of comments about the poor treatment of cadets were few. However, they were very strong and are still remembered by some of the respondents thirteen years after graduation.

> I carry some negative beliefs which stem from West Point. PE especially associated with having tc run in formation and being afraid of "falling out."

> Most instructors were insensitive and simply did not care about women cadets. Running in boots on the roads contributed to my knee problems today. We were to compete with male cadets and when we failed, they might change the standards. DPE was the Department without a heart. The experimental and bad experiences we (women) had with DPE was uncalled for and downright criminal.

> That my male counterparts used physical fitness as an excuse for keeping women back, when most of the time physical fitness was inconsequential to everyday duties.

> The emotional scars of my West Point physical education experience are with me even today. My

theory is that the DPE was one of the tools available to the instructors and the institution to help rid the Corps of the plague of female cadets.

Only a belief that the environment at West Point was very negative. If you couldn't do something, you were ostracized.

None! I overcame all the negative indoctrination that made physical fitness something I did to satisfy someone else.

The Army and USMA uses its people like kleenexes; toss them out when their usefulness is worn down.

I learned I was a good officer despite the negative feedback from fellow cadets and PE instructors.

The biggest impact was the pressure to be "just as good as the men." The physical differences between the men and women was one of the biggest discrimination issues and a "weak" argument on why women shouldn't be there.

I was not a runner and was labeled a "fallout" in Beast. (Beast Barracks is the term used first summer when the new cadets arrive at USMA)

Hated the pressure on running and its focus that you didn't measure up if you couldn't make the runs.

Initially, it had a very negative impact. The most significant difference between men and women at USMA was (and probably still is) our physical capabilities. Women were made to feel inferior because of these differences.

With the emphasis on fitness at West Point being as it is, it was not surprising to have women comment on their belief that physical training is considered too important.

However, it seemed that physical fitness was disproportional equated to leadership ability. My physical fitness was not critical to my abilities as an officer, since my duties required no physical exertion.

At West Point physical fitness was more important than leadership or academics when I was a cadet (as viewed by male classmates). Unfortunately, some of this "male mentality" carries over in the

Army, therefore I try to insure that I am in pretty good shape.

West Point personifies the myth that to be a good officer (or cadet) one had to be a good athlete.

Being fit is important, but at USMA, its significance is grossly exaggerated.

Class of 1980 Summary

The women from the class of 1980 were the first to go through every phase of the USMA physical education program. The Department of Physical Education had very little empirical data on which to develop a physical education curriculum which was to be as effective for the women as it had been for the men.

In reviewing the responses of these women in relation to the operational definition of effectiveness, it appears that the program was effective in preparing them for their roles as Army officers and leaders.

The graduates derived **satisfaction** from the physical education program at USMA; this is evident by the 79% positive comments which were made. They have acquired fitness **knowledge**, and skills. Thirty-three of the open-ended responses centered around the fitness knowledge gained, skills learned and the important benefits of fitness. This was further underscored with 75% either

strongly agreed or agreed that they had received adequate fitness knowledge while attending school at USMA. A commitment to regular **participation** in physical activity was evident in that 98% of the respondents currently engage in various types of activity for an average of 4 days per week for 52 minutes per session. Additionally, 76% reported that they take part in some type of physical activity because of their physical education experience at USMA.

Only 14 of the participants provide some type of input for their unit's physical training program; however, 13 of them strongly believed that they have a positive **impact** on the unit physical training program.

There were some negative comments about various aspects of the physical education program at the United States Military Academy. Again, this should not be surprising considering that these were the first women to go through a program which was evolving as they were experiencing it.

After an extensive review and analysis of the data for the class of 1980 it is apparent that the physical education curriculum was effective in preparing them for their role as Army officers and leaders.

## Class of 1985

The Honorable John O. Marsh, Secretary of the Army, was the commencement speaker for the graduation ceremonies

at the United States Military Academy in 1985. There were 1,063 graduating seniors and 116 of those were women. The women of this class represented the sixth class to have women among its ranks.

Demographics

Eighty or 69% of the women of the class of 1985 participated in this study. Table 4 (p. 88) shows the current status of those women today. Thirty-six or 45% of the respondents are still on active duty in the United States Army; four are in the Active Reserve; 21 are civilians, and 19 are in the Individual Ready Reserve. Their ages range from 29-33 with a mean age of 30 years. Seventy-one percent or 57 are married; 40 of the 57 are married to service members.

Women from the class of 1985 resigned from the active Army in 1988-1992. The greatest number (20) resigned in 1990, the point at which they fulfilled their five year obligation.

The women who are still on active duty or in the active reserve have all attained the rank of Captain. Two participants did not give their rank.

The women from this class are in nine different branches. The largest number (8) are in Ordnance, followed by Signal Corps with seven; the Military Police has five. The Military Intelligence and Quartermaster branches have four each, followed by Aviation and Transportation with

three each. The Engineers and Judge Advocate General have one each. One woman from this class resigned from the Army and received a commission with the United States Air Force.

The women who are still on active duty or serving with the Active Reserve reported on the type units to which they are currently assigned (Table 16), and their job titles (Table 17). Officers who are captains are referred to as company grade officers. The company grade ranks (second lieutenant, first lieutenant, captain) serve in positions with gradually increasing responsibility at company, battalion, brigade and division staff levels. Captains are usually company commanders, primary staff officers at battalion and occasionally brigade level, and will often serve as an assistant to staff officers at higher echelons of command. These women are currently serving in staff positions at Army, major command, corps, division, installation, readiness regions, and battalion levels. Some of these women are currently assigned as students earning advanced degrees at civilian universities and attending Army schools. Additionally, they are instructors with the Reserve Officer Training Corps (ROTC) and at the United States Military Academy. The Air Force officer is assigned to a helicopter squadron.

The job titles reported in Table 17 are typical for the rank of captain. S4 (logistician), company commander, inspector general, assistant S3, plans and exercise officer, graduate student, and attorney are all job titles

Table 16

Current Unit Assignments: Class of 1985

| Type Unit |
|---|
| Advanced Civilian Schooling |
| Army Schools |
| Army Staff Personnel Command |
| Battalion Staff |
| Central Intelligence Division |
| Corps Staff |
| Division Staff |
| Helicopter Squadron |
| Installation Staff |
| Major Army Command Staff |
| Readiness Group |
| Reserve Officer Training Command |
| United States Military Academy Staff & Faculty. |

Table 17

Job Titles: Class of 1985

| Job Titles |
| --- |
| Assistant Education Officer |
| Attorney |
| Battalion S4 - Logistics |
| Chief, Ordnance/Transportation Team |
| Chief, Training Division |
| Company Commander |
| Enrollment Officer |
| Executive Officer |
| Graduate Student |
| Group S4 - Logistics |
| Inspector General |
| Ordnance Team Chief |
| Plans and Exercise Officer |
| Recorder, Department of Army Secretariat |
| Recruiting Officer - Reserve Officer Training Command |
| Special Security Officer |
| Special Mission Pilot |
| Squadron Signal Officer |
| Training with Industry |
| Tactical Officer |

which are compatible with the type of units to which they are assigned.

Physical Activity Prior to Attending USMA

These women as a group were very physically active prior to entering the U.S. Military Academy. Seventy-nine or 99% engaged in some type of physical activity prior to becoming a cadet. There was a total of 32 different activities listed. The activities in which these women participated are rank ordered in Table 18. The most popular activity was running with 30 or 38% participating. The second most engaged in activity was basketball with 29, followed by track with 28, swimming with 27, and softball with 26. Volleyball, tennis, field hockey, and downhill skiing had 16, 15, 12, and 10 participants respectively. The remaining 23 activities had various numbers of participants ranging from eight to one.

Corps Squad, Intramural and Club Sport Participation

While at USMA these women continued to be physically active in corps squad athletics, the intramural program or club sports. These women participated in 11 different corps squad sports (Table 19). The largest number (14) were members of the track team, followed by nine running cross country, six who played softball, and four on the swimming team. Three each were members of the basketball, Rabble Rousers, pistol, and tennis squads. Two

Table 18

Activity Participation Prior to Entering USMA: Class of 1985

| Activity | Number |
|---|---|
| Running | 30 |
| Basketball | 29 |
| Track | 28 |
| Swimming | 27 |
| Softball | 26 |
| Volleyball | 16 |
| Tennis | 15 |
| Field Hockey | 12 |
| Downhill Skiing | 10 |
| Cycling | 8 |
| Soccer | 6 |
| Weight Training | 6 |
| Gymnastics | 5 |
| Cheerleading | 3 |
| Golf | 3 |
| Hiking | 3 |
| Lacrosse | 3 |
| Walking | 3 |
| Aerobics | 2 |
| Football (Recreational) | 2 |
| Horseback Riding | 2 |
| Ballet | 1 |
| Baseball | 1 |
| Caving | 1 |
| Dance | 1 |
| Drum Majorette | 1 |
| Farm Work | 1 |
| Orienteering | 1 |
| Racquetball | 1 |
| Rock Climbing | 1 |
| Sailing | 1 |
| Water Sports | 1 |
| None | 1 |

Table 19

Corps Squad Participation: Class of 1985

| Corps Squad | Number Participated |
|---|---|
| Track | 14 |
| Cross Country | 9 |
| Softball | 6 |
| Swimming | 4 |
| Basketball | 3 |
| Rabble Rouser[1] | 3 |
| Pistol | 3 |
| Tennis | 3 |
| Volleyball | 2 |
| Gymnastics | 1 |
| Mule Rider[2] | 1 |

[1] Rabble Rouser is a cheerleader.
[2] Mule Rider rides the mascot (a mule) at sporting events.

participated in volleyball; one was on the gymnastics team; and one was a mule rider. (The mule rider rides the Army mascot at sports events.)

These women participated in 17 different intramural activities (Table 20). Swimming was the most popular with 37, followed by track with 24, and soccer and volleyball with 16 each. Eight participated in cross country; triathlon had 7 participants. Flickerball and squash had four each and aerobics, basketball, racquetball, and softball had two each. Bowling, flag football, nautilus, Sandhurst, and tennis each had one participant.

In the club sports program (Table 21) there were 19 different activities listed. Nineteen women played lacrosse; 10 played soccer; nine ran with the marathon team; eight played team handball; and six were downhill skiers. Four were members of the cycling club, and four were members of the sailing club. Three each participated with the dance team, orienteering, and triathlon, and two each participated in bowling, cross country skiing, gymnastics and parachuting. Equestrian, fencing, judo, karate, and racquetball club had one participant each.

## Perceptions of Physical Education Curriculum Impact on Officer Role

Seventy-eight of the 80 respondents answered question 20: What experiences in physical education at USMA have impacted on your role as an Army officer? Of their

Table 20

Intramural Sport Participation: Class of 1985

| Intramural Sport | Number Participated |
|---|---|
| Swimming | 37 |
| Track | 24 |
| Soccer | 16 |
| Volleyball | 16 |
| Cross Country | 8 |
| Triathlon | 7 |
| Flickerball[1] | 4 |
| Squash | 4 |
| Aerobics | 2 |
| Basketball | 2 |
| Racquetball | 2 |
| Softball | 2 |
| Bowling | 1 |
| Flag Football | 1 |
| Nautilus | 1 |
| Sandhurst[2] | 1 |
| Tennis | 1 |

[1] Flickerball is a passing game which utilizes a football.
[2] Sandhurst is a military sweepstakes competition.

Table 21

Club Sport Participation: Class of 1985

| Club Sport | Number Participated |
|---|---|
| Lacrosse | 19 |
| Soccer | 10 |
| Marathon | 9 |
| Team Handball | 8 |
| Downhill Skiing | 6 |
| Cycling | 4 |
| Sailing | 4 |
| Dance Team | 3 |
| Orienteering | 3 |
| Triathlon | 3 |
| Bowling | 2 |
| Cross Country Skiing | 2 |
| Gymnastics | 2 |
| Parachute | 2 |
| Equestrian | 1 |
| Fencing | 1 |
| Judo | 1 |
| Karate | 1 |
| Racquetball | 1 |

responses it was determined that 66 were positive and two negative; six wrote that it was not applicable and four said there had been no impact. The strongest positive categories which emerged from the data were those of increased self-confidence, excelling physically, being a role model, and teaching ability.

Self-confidence. Thirty-nine or 50% of the participants discussed an increase in self-confidence that they gained as a result of the USMA experience, and that impacted on their role as an Army officer.

> I gained a considerable amount of confidence in my ability to perform more technical athletic feats, such as those on the obstacle course and in gymnastics courses. That confidence definitely showed in my physical performance while in the Army.

> All the experiences we had, when combined, gave me the confidence to perform any new physical task (i.e. Airborne school was a breeze compared to the IOCT!) and set me far ahead of my peers from other colleges as well as my soldiers.

> It gave me confidence, in particular as a platoon leader, when leading my troops (obstacle course, PT, etc.)

Excelling physically. Twenty-four percent of these women discussed their own physical performance. It was usually done to underscore a point; however, it is obvious that these women are very proud of their physical accomplishments and performance as soldiers.

> I entered active duty much more physically fit than my ROTC counterparts.

> I was selected as the Airborne Honor Graduate due in part to the fact I was in good shape and could easily keep up with my male counterparts.

> I always tried to "max" the APFT and did not settle for just "passing" the test. If I did not "max", I always tried my hardest.

> When I was in, I was generally considered the best female athlete in every battalion I was in.

> Held the IOCT record for females in my class during different years.

Role model. Another theme which emerged and was very strong as mentioned by 25% of the participants was that of being a role model and setting the example. These women are very much aware that the few women officers assigned to unit leadership roles are watched very closely. They use

their physical prowess to set the example for peers and subordinates alike.

As a woman I felt I was always being "watched" by others - those looking for a reason to say, "See there! Look at her! You can obviously see why women shouldn't be in the Army!" Since I felt all women would be judged by my performance, my training at WP gave me self-discipline and determination to lead by example. My level of physical fitness was one of the most important yardsticks by which I was measured. (i.e. Never should a woman fall out of a run!)

Being physically fit greatly affects the level of respect I receive from enlisted and junior soldiers.

I never fell out of a run - in fact, I was faster than many of the men (even after I had my baby) - my soldiers, male peers, and subordinates respected me and superiors put me in critical leadership roles, partly because of my physical fitness. It was a definite plus.

At USMA we were told to "set the example" I feel the physical education we received enabled me to do that.

> PT is the first and quickest way to earn or lose respect in the Army as an officer. You must be able to stay in and lead a company run.
>
> Lead by example. I believe you should always strive to max any event. Your soldiers look to see that you always put out 100% effort.
>
> Being able to lead physically has been an important asset as an officer, especially as a woman.
>
> ...the knowledge/fact that especially for a woman officer, we must remain in excellent shape to be respected and to motivate others in the Army. Being fit goes along way towards being professional and respected.

Teaching. Being an officer requires the ability to lead as well as teach. The physical fitness programs in units very often allow officers the opportunity to share their knowledge. Fifteen (19%) of the respondents commented on the experiences gained through physical education at USMA in helping them lead and teach their soldiers.

> The personal fitness class I took plebe year was valuable to me when I was a company commander. It provided the basic essentials for planning a sound fitness program. My company's PT and

weight control programs benefitted from the knowledge I gained in DPE classes.

The training we received in leading PT, grass drills, etc. helped me to supervise the PT program in my first company.

Strength development course was very good - enabled me to better assist soldiers with individual physical training.

...I was asked to train troops in water survival because of my swimming background.

It taught me how important it is to be in good shape. Since I was stationed at Ft. Eustis and we practiced drown proofing quite a bit with the stevedores, the survival swimming class helped me help them. I was not afraid of the drills and I could show others, especially non-swimmers some techniques.

After being WSI certified at USMA, I was able to teach some soldiers in my first unit how to swim.

Input and impact on unit physical training. When asked if they felt they received enough information/ knowledge about fitness while at USMA (question 9), 75 or

94% responded that they strongly agreed or agreed; five individuals or 6% disagreed.

When assigned to units as a company grade officer there are often many additional duties assigned. One such additional duty is providing guidance for the unit physical fitness program. Question 11 asked the respondents if they provided any input for their unit physical fitness program; 36 responded to this question. Sixteen responded that they always or often provide input; 10 reported that they seldom provide input, and 10 reported that they never provide any input. Of those who provide some type of input, when asked if they felt that their input had a positive impact on the unit's physical training program (question 12), 24 or 96% strongly agreed or agreed and one disagreed.

Physical training during deployment. When soldiers in the U.S. Army were deployed in support of Operation Desert Shield/Storm 16 of the women from the class of 1985 who responded to the survey were sent to South West Asia (question 13). Fifteen of those women felt that they were in excellent or good condition prior to deploying (question 14); one reported being in fair condition. The responses to question 15, which inquired as to the importance that physical conditioning played in their deployment, were as follows. Four strongly agreed that it played an important part in their deployment, seven agreed, three disagreed and two strongly disagreed.

Physical training often is not conducted during peacetime deployments due in large part to long work hours and mission requirements. That practice was supported by the responses of the deployed soldiers to question 16 which inquired as to their ability to maintain their physical fitness during Operation Desert Shield/Desert Storm. Only one agreed that she was able to maintain her fitness; 12 disagreed and three strongly disagreed, accounting for 94% of the responses.

Question 17 asked the participants to describe what they did in an attempt to maintain their physical fitness. The following are some of their responses:

> After the ground offensive - sit-ups, push-ups, sandbag lifting (stairmaster effect) and running.

> We didn't. Worked long hours. No showers available for large part of deployment.

> When conditions allowed went running (over 5 months less than 20 times), otherwise my fitness deteriorated.

> I did push-ups and sit-ups and walked everywhere. For the first 3 months of my deployment, my unit was required to wear rucksack (approx. 30 lbs.) carrying CPOGs (Combat Protective Overgarment Gear), wet weather gear etc. I didn't start

running again until my unit began preparing for redeployment.

As movement control officer for the 1st Armored Division. I was working 16-18 hrs/day, the other 6-8 hours I slept. I did not have available time until the last 2 weeks to run or participate in any physical activity (4 month deployment). I did not maintain my physical fitness level even though I was on my feet each day.

We did not have any way to "keep in shape" other than doing our jobs. We were in a remote area with showers at most twice a week, if your work didn't prevent you from using them (i.e. on a supply run).

PT 4 days a week, except during combat.

Perceptions of Physical Education Curriculum Impact on Current Values, Beliefs and Behaviors

The respondents reported current beliefs in the value of personal fitness, benefits of fitness, self-confidence, personal performance, continuing active participation in physical activity, and high scores on the Army Physical Fitness Test.

Value of personal fitness. When asked if they felt being in good physical condition is an important part of being a soldier (question 8), 64 or 80% strongly agreed and 16 or 20% agreed.

The participants were asked if their interest in physical fitness had increased since graduation (question 10). Sixty-five or 82% of the respondents strongly agreed or agreed that their interest in physical fitness had increased since graduation; 14 or 18% responded that they disagreed. One did not respond to the question.

When asked what values, beliefs or behavior changes they carry today as a result of the physical education experience at USMA (question 21), 67 or 84% of the responses were positive. One response was negative; four did not respond to the question; seven said the question was not applicable and one commented that she had no behavior changes because of her USMA DPE experience.

Benefits of fitness. The theme that came through as the strongest was belief in the benefits of fitness, both physically and mentally. Many of the comments related to the benefits of fitness in all areas. Forty of the respondents or 50% commented on how they value the benefits of fitness.

> ...I believe good physical health is crucial to total wellness (emotional, spiritual, etc).

That keeping in shape is vital to my (everyone's) overall well-being. Helps one to have energy and handle stress better.

I believe energy level is directly related to nutrition and exercise. I place a high value on exercise.

I understand long-term benefits of fitness and work to live a fit, creative life.

I realize that physical fitness is an integral part of total wellness.

I am aware of how good physical fitness can affect <u>all</u> areas of life - - emotional, stress-relief, child-bearing(!) etc.

That physical fitness is an essential part of one's overall well-being and also mental health and emotional stability.

I value physical fitness/personal fitness and the positive impact it has on life in general - more energy, higher self-esteem, confidence.

That maintaining good physical fitness is important not only to being a good officer but also increases my ability to deal with stress at the office and in my personal life.

USMA physical education program strengthened my beliefs and feelings that being physically fit not only affects the body but also provides for good mental health.

The Military Academy has influenced my whole attitude about a fit body and fit mind. "Fitness" is part of my life because of West Point. I constantly worry/pursue better fitness levels.

It's extremely important for me to be in good shape - not only muscularly, but also cardiovascularly, as well. Although I didn't exercise before going to WP, DPE successfully ingrained in me the belief that exercise should be part of everyone's lifestyle, regardless of age.

Self-confidence. Another theme which came through for this class was increased self-confidence as noted by 31% of the respondents. The physical education experience had by these women resulted in more self-confidence.

I believe West Point reinforced my beliefs that I can accomplish anything I put my mind to.

The biggest behavior change I noticed was discipline in my fitness regimen. I was able to focus my energies on a goal. I use the same philosophy in other tasks.

I was never really an athlete prior to attending WP, but now I feel confident in my abilities and try to maintain a decent level of fitness.

I became much more confident in my physical capabilities while at West Point. I think being able to participate in so many types of sports gave me the confidence to attempt things I would not have tried otherwise.

All my physical activities at USMA (DPE, orienteering, running) gave me the confidence that I can do it again, even after nine months of being pregnant.

I am much more self-confident in my overall abilities. West Point physically tested my endurance to levels I had never reached and made me feel I could do anything.

Personal performance. Fourteen of the respondents commented on various aspects of their own physical performance today because of their physical education experience at the Military Academy.

> Even now, after three years as a civilian and no one telling me I need to exercise, I maintain a high level of fitness.

> I run a lot more and longer distances.

> I have consistently scored 270 or better on the APFT throughout my career.

Current participation in physical activity. Supporting the value that these women place on physical fitness is the behavior of participating in many physical activities. Table 22 illustrates the physical activities that these women graduates currently engage in as a result of the physical education experience at USMA. Thirty-eight different activities are listed. Ten of the women did not respond to the question; seven commented that the physical activities they participate in are not a result of USMA; and two said the question was not applicable. Running is the top physical activity with over half of the participants engaging in that activity. This is not surprising with the emphasis the Army places on running. Aerobics (27) is the second most popular activity followed

Table 22

Current Activity Participation: Class of 1985

| Activity | Number |
|---|---|
| Running | 45 |
| Aerobics | 27 |
| Weight Lifting | 19 |
| Cycling | 16 |
| Swimming | 15 |
| Walking | 14 |
| Volleyball | 8 |
| Sit-ups | 7 |
| Racquetball | 6 |
| Tennis | 6 |
| Triathlon | 6 |
| Golf | 5 |
| Nautilus | 5 |
| Body Toning | 4 |
| Calisthenics | 4 |
| Hiking | 4 |
| Push-ups | 4 |
| Downhill Skiing | 3 |
| Rollerblading | 3 |
| Stair Climber | 3 |
| Basketball | 2 |
| Biathlon | 2 |
| Bowling | 2 |
| Cross Country Skiing | 2 |
| Lacrosse | 2 |
| Stretching | 2 |
| APFT | 1 |
| Duathlons | 1 |
| Figure Skating | 1 |
| Half Marathon | 1 |
| Lifecycle | 1 |
| Marathon | 1 |
| Nordic Track | 1 |
| Rucking | 1 |
| SCUBA | 1 |
| Skydiving | 1 |
| Track | 1 |
| Unit Physical Training | 1 |
| None | 7 |
| No Response | 10 |
| Not Applicable | 2 |

by weight lifting (19), cycling (16), swimming (15), and walking (14).

Questions 24a and 24b asked how many days each week they work out and how long each session lasts. All 79 women who responded to the question work out regularly. One woman did not answer this question. Table 23 displays the number of days these women work out each week. Average duration of the work out session is illustrated in Table 24.

The number of days these women engage in physical activities each week varies. The range of responses was one to seven days a week. On the low end of the scale, two women each reported they work out one or two days each week. At the upper end of the scale, three women reported that they work out seven days a week. The mean number of days these women work out is 4.36. The mode is five days a week, reported by 27 women.

The actual amount of time devoted to each work out session also varied. The range of the work out sessions was 20 minutes as the minimum to 120 minutes as the maximum. The average amount of work out time spent by these women is 55.88 minutes. The most common amount of time spent during each work out session is 60 minutes as reported by 20 women. For the class of 1985, the average work out is 4 days per week for a period of 56 minutes.

Current fitness levels. The Army requires that soldiers participate in physical fitness training several

Table 23

Current Work Out Frequency: Class of 1985

| Number of Days | Participants | Percent |
|---|---|---|
| 1 | 2 | 2.5 |
| 2 | 2 | 2.5 |
| 3 | 19 | 24.1 |
| 4 | 15 | 19.0 |
| 5 | 27 | 34.2 |
| 6 | 11 | 13.9 |
| 7 | 3 | 3.8 |

Table 24

Duration of Each Current Work Out Session: Class of 1985

| Minutes | Participants | Percent |
|---|---|---|
| 20 | 1 | 1.3 |
| 25 | 3 | 3.8 |
| 30 | 5 | 6.3 |
| 35 | 3 | 3.8 |
| 40 | 6 | 7.6 |
| 45 | 13 | 16.5 |
| 50 | 8 | 10.1 |
| 55 | 3 | 3.8 |
| 60 | 20 | 25.3 |
| 75 | 9 | 11.4 |
| 80 | 1 | 1.3 |
| 90 | 4 | 5.1 |
| 120 | 3 | 3.8 |

days each week. One measure by which a soldier is evaluated is his or her performance on the Army Physical Fitness Test (APFT). Table 25 depicts the most recent scores the women from the class of 1985 received on their APFT (question 7e).

The mean score was 283.70 and the mode was 300 with 12 individuals achieving the maximum score allowable.

Negative Perceptions of the USMA Physical Education Curriculum

In the two questions (20 & 21) which were open-ended there were only three negative comments made. The first two comments are clearly negative; the third comment is that of a graduate who had a negative experience while at USMA; however, she definitely carries some positive values, beliefs and behaviors as a result of her experience.

> Academy teaches that physical fitness ability is directly linked to a person's ability to lead and be a "good officer." I don't necessarily believe this anymore.

> Although very athletic, I am only an average athlete. I did not perform well on the APFT and developed very low self-esteem as a runner and athlete. I suppose you could say my negative experience at West Point spurred me on to subsequent top-level physical fitness, but I

Table 25

Army Physical Fitness Test Scores: Class of 1985

| Most Recent Score | Frequency |
|---|---|
| 230 | 2 |
| 248 | 1 |
| 260 | 1 |
| 262 | 1 |
| 263 | 1 |
| 265 | 2 |
| 270 | 1 |
| 272 | 1 |
| 274 | 1 |
| 275 | 2 |
| 285 | 2 |
| 286 | 1 |
| 287 | 1 |
| 292 | 1 |
| 293 | 2 |
| 296 | 2 |
| 298 | 2 |
| 299 | 1 |
| 300 | 12 |

believe a more constructive, instructive program at USMA would have been a lot less painful.

I had a very negative physical education experience at USMA, but I came away with some very strong values, beliefs, and behavior changes. I believe very strongly in "a sound mind and sound body" and place a lot of emphasis on physical fitness through cross-training activities. I strongly believe in the physical fitness of all soldiers to improve their personal and unit performance effectiveness in all areas. I believe you should always do your be. and lead by example.

Class of 1985 Summary

The women in the class of 1985 were members of the sixth United States Military Academy graduating class to include women. All five classes ahead of them had women among their ranks; many of the trails had already been blazed prior to their arrival.

The effectiveness of the USMA physical education program is apparent based on the positive comments made by the women from this class. These women appear to have derived a great deal of **satisfaction** from the physical education program at USMA; only three comments out of 160 were considered negative.

Acquired fitness **knowledge**, skills learned and the benefits of fitness were noted in 52% of the responses. Over 93% of the respondents believed that they received enough **knowledge** about fitness from DPE. Many also indicated that they have shared much of their **knowledge** with other soldiers.

**Participation** in regular physical activity is a way of life for 99% of these women. On the average they workout four days per week for 56 minutes per session. Eighty percent noted that they engage in some type of physical activity because of the physical education experience at USMA.

Twenty-six of the respondents reported that they provide various degrees of input to the units' physical training programs and 24 reported that they believe their input has a positive **impact** on the program.

The women from the class of 1985 have benefitted greatly from the experiences of the women who have gone through the physical education program before them. After analysis of the data it is apparent that the physical education program at the United States Military Academy was effective in preparing these women for their role as Army officers and leaders.

## Class of 1990

On 31 May 1990, the 11th class with women enrolled graduated from the United States Military Academy.

Ninety-three women graduated that day. The commencement address was given by Vice President Dan Quayle. One of the women in this class was Kristen Baker. Kristen was the first woman ever to serve as the Brigade Commander for the United States Corps of Cadets. The Brigade Commander is the highest ranking cadet.

Demographics

Fifty-five women from the class of 1990 participated in this study. Table 4 (p. 88) depicts the current status of the women. Of the 55 respondents, 48 or 87% are still on active duty in the Army. One is in the active reserve, three are civilians, and three are in the individual ready reserve. Their ages range from 24 to 28 years with 25 the mean age of these graduates. Fifty-one percent are married and of those married 24 or 86% are married to service members.

Graduates of USMA have a five year commitment upon graduation. However, seven of these women indicated that they are no longer serving on active duty. The respondents were not asked for an explanation for resigning, nor were any explanations provided. With the move toward a reduction in the size of the Army many junior grade officers have been offered the chance to leave the Army prior to completing their commitment. It seems probable that this is the major reason for early resignation prior to fulfilling the five year obligation. The seven women

who resigned did so in 1992 and 1993; one resigned in 1992 and six resigned in 1993.

The women who are still on active duty have attained the rank of First Lieutenant. The women from this class are in 11 different branches. (See Table 5, p. 89). Military Intelligence has the most with 11 reporting this as their branch, followed by Signal with seven, Ordnance with six, Quartermaster and Transportation with five each, and Engineer and Military Police with four each. The remaining branches include Aviation with two and Adjutant General, Air Defense Artillery, and Chemical with one each. A difference with this class from the classes of 1980 and 1985 is that there are no doctors or lawyers. These women are still too junior to have been selected to attend medical or law school.

Table 26 portrays the type of units to which these women are presently assigned. They are assigned at battalion and company levels and some at brigade level. They have completed their basic courses and are learning how the Army operates.

The job titles (Table 27) that these women reported are consistent with the units to which they are assigned and their ranks. As very junior company grade officers they serve as platoon leaders, executive officers, assistant staff officers and occasionally primary staff officers at battalion level.

Table 26

Current Unit Assignments: Class of 1990

| Type Unit |
| --- |
| Airborne School |
| Battalion Staff |
| Branch Advanced Course |
| Brigade Staff |
| Company |
| Detachment |
| Division Support Command |
| Explosive Ordnance Disposal Unit |
| United States Military Academy Staff & Faculty |

Table 27

Job Titles: Class of 1990

| Job Title |
|---|
| Adjutant - Personnel Administration |
| Assistant, Battalion S2 - Intelligence |
| Assistant, Battalion S3 - Plans, Operations & Training |
| Assistant, Battalion S4 - Logistics |
| Assistant, Secretary General Staff |
| Battalion S2 - Intelligence |
| Battalion S4 - Logistics |
| Battalion Signal Officer |
| Chemical Officer |
| Detachment Commander |
| Executive Officer |
| Forward Area Support Team, Officer in Charge, Croatia |
| Maintenance Officer |
| Material Maintenance |
| Outreach Officer |
| Platoon Leader |
| Shop Officer |

Physical Activity Prior to Attending USMA

Prior to entering USMA in 1986 these women were fairly physically active; 52 reported engaging in some type of physical activity with only three reporting they engaged in none. The 25 different activities they engaged in are reported in Table 28. Track was the activity in which the largest number participated with 25. Softball followed with 22, basketball and swimming with 14, and cross country and volleyball with 13. Ten individuals reported running.

Corps Squad, Intramural and Club Sport Participation

While at USMA they participated in 13 different corps squad sports (Table 29). Track had six, soccer and swimming five each, while Rabble Rouser, cross country, softball, and volleyball had three each. The following corps squad sports had one each, basketball, crew, judo, pistol, ski patrol, and tennis.

These women took part in 19 different intramural sports (Table 30). Swimming led the list with 21, followed by soccer with 18, basketball 13, triathlon 12, and team handball 11. Sandhurst had nine participants while cross country, handball, and wallyball had six each. Softball had five followed by flickerball and racquetball with four each. Three participated in 3x3 basketball and volleyball. Area hockey, 5'10" and under basketball, and tennis had two. There was one participant each in aerobics and field hockey.

Table 28

Activity Participation Prior to Entering USMA: Class of 1990

| Activity | Number |
|---|---|
| Track | 25 |
| Softball | 22 |
| Basketball | 14 |
| Swimming | 14 |
| Cross Country | 13 |
| Volleyball | 13 |
| Running | 10 |
| Soccer | 8 |
| Cycling | 7 |
| Tennis | 6 |
| Cross Country Skiing | 4 |
| Downhill Skiing | 4 |
| Cheerleading | 3 |
| Gymnastics | 3 |
| Weight Lifting | 3 |
| Field Hockey | 2 |
| Golf | 2 |
| Hiking | 2 |
| Horseback Riding | 2 |
| Water Skiing | 2 |
| Aerobics | 1 |
| Ballet | 1 |
| Judo | 1 |
| Karate | 1 |
| Triathlon | 1 |
| None | 3 |

Table 29

Corps Squad Participation: Class of 1990

| Corps Squad | Number Participated |
|---|---|
| Track | 6 |
| Soccer | 5 |
| Swimming | 5 |
| Rabble Rouser | 3 |
| Cross Country | 3 |
| Softball | 3 |
| Volleyball | 3 |
| Basketball | 1 |
| Crew | 1 |
| Judo | 1 |
| Pistol | 1 |
| Ski Patrol | 1 |
| Tennis | 1 |

Table 30

Intramural Sport Participation: Class of 1990

| Intramural Sport | Number Participated |
|---|---|
| Swimming | 21 |
| Soccer | 18 |
| Basketball | 13 |
| Triathlon | 12 |
| Team Handball | 11 |
| Sandhurst[1] | 9 |
| Cross Country | 6 |
| Handball | 6 |
| Wallyball[2] | 6 |
| Softball | 5 |
| Flickerball[3] | 4 |
| Racquetball | 4 |
| 3 on 3 Basketball | 3 |
| Volleyball | 3 |
| Area Hockey | 2 |
| 5'10" & Under Basketball | 2 |
| Tennis | 2 |
| Aerobics | 1 |
| Field Hockey | 1 |

[1] Sandhurst is a military sweepstakes competition.
[2] Wallyball is volleyball played in a racquetball court.
[3] Flickerball is a passing game which uses a football.

The women from the class of 1990 participated in 16 different club sports (Table 31). The number of participants in club sports is not as high as intramurals. Lacrosse was the highest with seven followed by gymnastics and team handball with five each. There were three each in crew, cross country skiing, downhill skiing, and power lifting. Equestrian, karate, marathon had two each. One each participated in cycling, judo, mule rider, racquetball, sailing, and triathlon.

## Perceptions of Physical Education Curriculum Impact on Officer Role

Question 20 asked what experiences in physical education at USMA have impacted on their role as an Army officer. Fifty-two responded to the question; one comment was considered negative, with 51 or 98% being positive. Three individuals did not respond to the question. Two categories became evident in the analysis of these responses: increased self-confidence based on physical accomplishments, and the importance of the Master Fitness Trainer (MFT) program.

Self-confidence. An increase in self-confidence as an officer because of fitness levels and physical skills learned was the theme which was mentioned by 27 or 52% of the participants. Many of these women commented on using skills learned at USMA in accomplishing tasks in their units. The accomplishment of physical tasks has brought

Table 31

Club Sport Participation: Class of 1990

| Club Sport | Number Participated |
|---|---|
| Lacrosse | 7 |
| Gymnastics | 5 |
| Team Handball | 5 |
| Crew | 3 |
| Cross Country Skiing | 3 |
| Downhill Skiing | 3 |
| Power Lifting | 3 |
| Equestrian | 2 |
| Karate | 2 |
| Marathon | 2 |
| Cycling | 1 |
| Judo | 1 |
| Mule Rider[1] | 1 |
| Racquetball | 1 |
| Sailing | 1 |
| Triathlon | 1 |

[1] Mule Rider rides the Army mascot (a mule) at sporting events.

satisfaction and has resulted in a positive impact on their soldiers.

> Learning to play "team" sports rather than just "individual" made me more aggressive and confident. It also helped me be a "part" of my platoon when I would engage in pick-up basketball or football, rather than just watching from the sidelines. And being unafraid to spice up PT with some team sports earned me respect and gratitude.
>
> Being able to climb a rope of any height has come in handy. The technique I learned at USMA has paid off.
>
> I know I can push myself physically and I reach for 100%, not barely passing events or getting through PT.
>
> The overall idea that you need to work hard to achieve goals and standards.
>
> It forced me to try things I normally wouldn't have. I think this gave me some added confidence as an officer.

> Self-defense, CQC (Close Quarters Combat), survival swimming and Sandhurst have made me very self-confident when it comes to "playing with the boys."

> I had never run before college. Now I enjoy it a lot, and I appreciate being able to stay in formation with my soldiers in PT, something I never would have been able to do before college.

Master fitness trainer program. A second strong theme in response to this question from the class of 1990, was the importance of the Master Fitness Trainer (MFT) program. The MFT program was implemented at USMA in 1988. It is an integral part of the total physical education experience at USMA; cadets are instructed in various MFT courses throughout their four years. As freshmen they take Fundamentals of Physical Fitness (FPF); as sophomores they take the MFT core course; and as seniors they take a course in War-Fighting Fitness. In addition to the courses the cadets serve in various leadership positions during Cadet Basic Training and Cadet Field Training.

To earn the MFT identifier a cadet must pass FPF with a grade of 70% or higher; develop a 60 day unit fitness plan as part of the MFT core course; and pass a comprehensive examination during the senior year. Additionally, cadets must complete satisfactorily the War-Fighter Project, and earn a grade of C or better on the two

APFTs administered during their senior year. Only then will a graduating cadet earn the MFT skill identifier. The MFT identifier indicates to a commander that a particular officer has the knowledge and skills required to provide guidance on the unit's physical fitness program.

Prior to the implementation of the MFT program at USMA the only place to earn the MFT identifier was at Ft. Benjamin Harrison, Indiana. Two women from the class of 1980 indicated that they were MFT qualified and six from the class of 1985. The class of 1990 was the first class to have the opportunity to receive the identifier through USMA. Question 5 of the survey asked if they were a Master Fitness Trainer. Eighty-nine percent or 49 responded that they were MFT qualified; six responded that they were not.

There were 23 or 44% who commented on the MFT program. All of the responses about the MFT program were both positive and enthusiastic. Representative comments follow:

> MFT related courses taught me a great deal about total fitness.

> Adding the MFT course to the curriculum was an important change because it taught me more about the <u>way</u> things should be and the way they are, and how to go about designing a program, so it's not haphazardly put together.

Graduates for 1990 were the first to go through a Master Fitness Course. From that I also learned a lot about nutrition. It seems that most people do not know a lot about that subject. I enjoy helping soldiers having weight problems.

The MFT course has helped me plan and evaluate my unit PT. This way, I give my NCOs guidance, yet still allow them to execute, since unit PT is always "NCO Business." With the MFT training, it is easy to spot flaws in a unit program, and also easy to figure out what needs to be done in order to keep your soldiers fit.

The Master Fitness Trainer course we took has given me an educated view of how to physically train a unit.

The MFT course has allowed me to be involved in developing unit physical fitness programs. The wide variety of courses has allowed me to add variety to unit physical fitness programs.

Input and impact on unit physical training. These women were asked if they believe they received enough information/knowledge about fitness while they were at USMA (question 9). Fifty-three or 96% of the respondents

strongly agreed (n=34) or agreed (n=19), with two disagreeing.

When asked if they provide input for their units' physical fitness programs (question 11), 48 responded to the question. Ten or 21% always provide input, 12 or 25% often provide input, 15 or 31% seldom and 11 or 23% never provide input. The respondents were not asked to provide any additional information, but a response to question 20 may provide some insight.

> Being MFT trained was a little aggravating at the 101st because my unit was not too "amenable" to doing anything different.

Very often a unit's physical fitness program only consists of the three APT events; running, push-ups and sit-ups. These young second lieutenants arrive at units with new ideas which are not always readily received. However, when they were asked if their input has a positive impact (question 12), their responses were favorable. Eighty-nine percent believe they have a positive impact on their unit PT program with 11% disagreeing.

Physical training during deployment. The class of 1990 had just finished their first year on active duty when many of them were deployed in support of Operation Desert Shield/Storm. Twenty-five percent or 12 of the respondents who are currently on active duty were deployed. Seven of these women reported that they believed they were in excellent physical condition prior to deployment (question

14) and five responded that they were in good physical condition. Four of the 12 agreed that physical condition played an important part in deployment (question 15), while eight disagreed. When asked if they were able to maintain their physical fitness during deployment (question 16), two agreed, five disagreed and five strongly disagreed.

In question 17 they were asked what they did to maintain their physical fitness during deployment. The following are some of their responses:

> After the cease fire was called in Feb I went running a few days up and down the road leading to my site in boots. When we redeployed to Camp Eagle II, I was able to run daily in PT gear. This was approximately one week before returning to Ft. Campbell.

> We made an attempt to sustain our fitness level by running and playing volleyball; however, early in the conflict, we were so busy, it was much more difficult. Therefore, I feel that I probably left Saudi Arabia in worse shape than when I got there.

> After the ground war my unit returned to a log base where we could do PT. We mostly ran, but also did aerobics and circuit training. For the

first time in three months in SWA, we were only able to do PT on a very limited basis.

Perceptions of Physical Education Curriculum Impact on Current Values, Beliefs and Behaviors

The respondents commented on current beliefs in the value of personal fitness, benefits of fitness, increased self-esteem, continuing active participation in physical activity, and current fitness level.

Value of personal fitness. Question 8 asked if they believe being in good physical condition is an important part of being a soldier. Eighty-nine percent or 49 strongly agreed and 11% or six agreed.

Question 10 asked if their interest in personal fitness had increased since graduation. Forty-nine strongly agreed or agreed, five disagreed and one strongly disagreed.

After spending four years at the United States Military Academy it is not surprising to find out that graduates take much away from the institution. The participants were asked what values, beliefs or behavior changes they carry today as a result of the physical education experience at the Military Academy (question 21). From the 55 participants, 51 of the comments were positive, one was negative, one had no response, one stated that it was not applicable, and one commented that she recognized

no changes. The categories that were developed were the benefits of fitness and increased self-esteem.

Benefits of fitness. Fifty-nine percent or 32 discussed the importance of fitness in their everyday lives.

> I believe in the importance of physical fitness to the individual, regardless of occupation or age. I am much more aware of what makes up physical fitness.

> While at USMA, I used working out as a way to relieve stress, not necessarily geared towards training for the APFT, etc. So I carry an internalized desire to accomplish some PT everyday.

> Obviously, I believe physical fitness is important to everyday life, not just as a soldier in the Army. I will continue to pursue fitness for the rest of my life.

> I firmly believe that a good physical fitness program sets the "tone" for everything else you do. I had this "value" before I went to West Point, but after being surrounded in such a "physical" fitness environment at West Point with everyone being very fitness minded, I feel that I

think every good officer in the Army should be that way. I believe my "fitness" should be my first positive point people see in me.

I will always be fit and not get overweight.

I firmly believe that good fitness is healthy mentally, and of course physically.

I believe that having a physically fit body is a key ingredient to being a positive, healthy leader.

I believe that all military members need to maintain outstanding health and physical fitness.

I take a lot more pride in myself and physical condition since learning about health and physical fitness.

I try to exercise five times a week for 45-60 minutes. I eat more nutritious meals. I do not overexert myself when working out. I have a much healthier lifestyle than before I entered West Point.

Physical fitness is extremely important, it affects my attitude. The better shape I am in,

the better my outlook is. My grades were the worst when I was physically sluggish at West Point. I will always stay fit, even if I leave the military.

Increased self-esteem. Another theme which emerged from the participant responses was that of a change in the way they think and feel about themselves; self-confidence, dedication, and not giving up are some of the behaviors noted. Sixteen or 30% commented on this aspect of their physical education while at West Point.

I have never fallen out of a run. West Point helped me have the confidence and mental discipline I need on tough runs.

Always to be competitive with the guys and trying to test myself on their levels. Always play fair - and hard.

I realized at USMA that I do have athletic ability and can learn to play a wide variety of sports, even though I wasn't taught how to throw properly at age 5.

A strong belief in teamwork, unit cohesion, and dedication to a common goal. The courage to continue in the face of demanding challenges. "never giving up," tenacity. The desire for

continuous self-improvement and the achievement of excellence.

Mostly self-confidence and "fight-to-win" mentality.

I can do any physical activity once I put my mind to it!

I have changed my negative thinking (for the most part) as a result of PE at USMA. I used to be afraid of failing and told myself that I couldn't do it, even if I tried. So I never <u>really</u> tried. I stayed in bad shape and that was my excuse for failing. Not until my Firstie (senior) year when I really got in shape and trained for the IOCT did I discover I could succeed if I really <u>did</u> try.

One participant summed up her physical education experience at USMA and how it has impacted on her role with the 82nd Airborne Division, one of the Army's most visible rapid deployment units.

PT has been instrumental to my success as an officer, especially as a <u>female</u> officer here at Ft. Bragg and in the 82nd Airborne Division. The respect that I earned by just being able to lead my plt on 12m ruck marches, unit runs, etc. could

not have been earned any other way. It seems that the respect for physical ability carried over to the other aspects of my job - my peers, subordinates, and supervisors "assumed" I was competent because I could maintain the physical standards of the division. The Academy helped me in two major ways - first, by challenging me to do things which I never thought myself capable (rucking, self-defense, rope climbing, obstacle course). Second, by maintaining standards that were equal with men and separating men/women as little as possible. I expect my soldiers and myself to maintain standards, regardless of gender. Many of my female soldiers cannot keep up with the men because they have never been expected to.

Current participation in physical activity. Current participation in physical activities as a result of their physical education experience at USMA is another area in which the participants were asked to comment (question 22). Fifty-one or 93% of the women participate in at least one activity because of their USMA experience; one did not respond to the question, and three commented that their participation in physical activities is not because of USMA.

Table 32 displays the total responses to this question. The activity engaged in the most by the

Table 32

Current Activity Participation: Class of 1990

| Activity | Number Participants |
|---|---|
| Running | 35 |
| Weight Lifting | 18 |
| Aerobics | 12 |
| Cycling | 9 |
| Volleyball | 8 |
| Swimming | 7 |
| Unit Physical Fitness Training | 7 |
| Downhill Skiing | 4 |
| Softball | 4 |
| Stair Climber | 4 |
| Stationary Bike | 4 |
| Triathlon | 4 |
| Basketball | 3 |
| Cross Country Skiing | 3 |
| Hiking | 3 |
| Tennis | 3 |
| Golf | 2 |
| Racquetball | 2 |
| Soccer | 2 |
| Duathlons | 1 |
| Football | 1 |
| Lacrosse | 1 |
| Marathon | 1 |
| Rollerblading | 1 |
| Rugby | 1 |
| SCUBA | 1 |
| Skydiving | 1 |
| Step Aerobics | 1 |
| Team Handball | 1 |
| Walking | 1 |
| None as a result of USMA experience | 3 |
| No Response | 1 |

respondents is running with 35 or 64% running because of USMA. Weight lifting was second with 18, followed by aerobics with 12, cycling with nine, volleyball with eight, swimming and unit physical fitness training with seven each. The following activities had four each: downhill skiing, softball, stair climber, stationary bike, and triathlon. Basketball, cross country skiing, hiking, and tennis had three each. There were two each for the activities of golf, racquetball, and soccer. The following activities had one participant each: duathlons, football, lacrosse, marathon, rollerblading, rugby, SCUBA, skydiving, step aerobics, team handball, and walking.

One of these participants has trained with the National Team Handball Team at the Olympic Training Center in Colorado Springs, Colorado.

Quite possibly one respondent summed up the reason for continued activity among USMA graduates:

> The competitive edge instilled in cadets at West Point does not usually fade when they graduate - it seems to find other outlets (other than corps squad/club sports). I began competing in triathlons (with classmates) upon arriving at my first duty station (Ft. Bragg), and I also did some road races and duathlons. The PE program also gave me the <u>confidence</u> to try different things, like skydiving, bungee jumping, canoeing, etc. (we're still working on learning how to

hangglide...). I've also done some post intramural sports. By far, the highlight has been competing in the US Military Sports Association triathlon in St. Croix with other triathletes from Ft. Bragg.

The commitment to physical fitness is evident in the number of days they workout (question 24a) and the duration of each work out session (question 24b). All 55 women responded to this question. The work out frequency in days (Table 33) ranged from a minimum of two days per week to a maximum of seven days a week. The mean number of work out days each week was 5.1 days, with the most frequently occurring response being 6 days (n=23).

Table 33

Current Work Out Frequency: Class of 1990

| Number of Days | Participants | Percent |
|---|---|---|
| 2 | 1 | 1.8 |
| 3 | 6 | 10.9 |
| 4 | 5 | 9.1 |
| 5 | 17 | 30.9 |
| 6 | 23 | 41.8 |
| 7 | 3 | 5.5 |

The duration for each work out session (Table 34) ranged from a minimum of 30 minutes to a maximum of 150 minutes. The average amount of time spent per session was

Table 34

Duration of Each Current Work Out Session: Class of 1990

| Minutes | Participants | Percent |
|---|---|---|
| 30 | 2 | 3.6 |
| 35 | 3 | 5.5 |
| 40 | 4 | 7.3 |
| 45 | 5 | 9.1 |
| 50 | 5 | 9.1 |
| 60 | 20 | 36.4 |
| 65 | 1 | 1.8 |
| 70 | 1 | 1.8 |
| 75 | 8 | 14.5 |
| 90 | 4 | 7.3 |
| 135 | 1 | 1.8 |
| 150 | 1 | 1.8 |

61.4 minutes; the mode was 60 minutes with 20 individuals responding. For the women in the class of 1990, the average workout is five days each week for a period of 61 minutes.

Current fitness levels. Forty-nine of the women responded to question 7e which asked for their most current APFT score. Table 35 displays their responses. The scores ranged from 250 to 300. The mean score for the group was 288.77 with a mode of 300. Eighteen or 37% of the respondents received a maximum score on the APFT.

## Negative Perceptions of the USMA Physical Education Curriculum

The class of 1990 had very few negative comments in regard to their physical education experiences at the United States Military Academy. In the two questions which were evaluated for both positive and negative responses (questions 20 & 21) there were only two negative comments. These comments account for less than 2% of the comments made.

One of the comments addressed gender issues.

> I look at my PE at West Point as an anomaly in my life. Once while taking an APFT, a DPE grader wouldn't count my push-ups until I was clicking just beneath my collarbone and accused me of using my breasts to an unfair advantage. This is

Table 35

Army Physical Fitness Test Scores: Class of 1990

| Score | Frequency |
|---|---|
| 250 | 1 |
| 253 | 1 |
| 260 | 1 |
| 262 | 1 |
| 263 | 1 |
| 264 | 1 |
| 267 | 1 |
| 270 | 1 |
| 271 | 1 |
| 276 | 1 |
| 277 | 1 |
| 283 | 1 |
| 284 | 2 |
| 286 | 1 |
| 288 | 2 |
| 291 | 3 |
| 292 | 2 |
| 293 | 1 |
| 295 | 2 |
| 296 | 2 |
| 297 | 2 |
| 299 | 2 |
| 300 | 18 |

> in direct contrast to the PT I have found in the Army, where they seem to take a truly unbiased approach and encourage men and women to excel personally.

The other negative comment discussed the issue of the weigh-ins conducted by DPE. These are conducted periodically to make sure that cadets maintain a predetermined weight which is considered appropriate for their age, height, and gender. If a cadet is determined to be overweight he or she is placed in the weight program. Their weight is monitored more closely and they are weighed more frequently. A cadet can be dismissed from USMA for failing to make progress while enrolled in the weight program.

> Bad beliefs were formed at the Academy because of the way we were pulled out of formations to be weighed/taped. Serious ridicule had a harsh impact on women in particular. Many, many women cadets were bulemic. It seems we all still are paranoid and have a serious lack of self-confidence connected to the "DPE weigh-in experience." I think a correlation between PT performance and weight should be studied.

Class of 1990 Summary

The class of 1990 appears to have taken a great deal away from the physical education program at the United

States Military Academy. They had the advantage of having 10 classes of women go through the physical education program before them. **Satisfaction** from the USMA physical education curriculum appears evident based on the large percentage (98%) of positive comments from the most recent graduating class in this study.

Acquired fitness **knowledge**, skills learned, and benefits of fitness was noted in 67% of the responses. Additionally, 96% of the respondents believe that they received enough **knowledge** in the area of fitness while at USMA.

One hundred percent of the respondents **participate** in physical activity on a regular basis. Three of these women did not participate in physical activity prior to entering USMA. Today on average the women from this class work out five days per week for 61 minutes per session.

The Master Fitness Trainer Program at the Military Academy has had a beneficial **impact** on the Army. Thirty-seven of the 55 participants reported that they provide some type of input to their units' physical fitness programs. Of those providing input, almost 90% believe that their input has had a positive **impact**.

Based on the data collected and analyzed for this research the USMA physical education curriculum was effective in preparing the women graduates from the class of 1990 for their role as Army officers and leaders.

# Discussion

## Class Comparisons

It is difficult to look at these three classes and not try to deduce some similarities and differences. The classes of 1980, 1985 and 1990 essentially went through very different programs. The class of 1980 went through all four years being the first women to experience all aspects of the physical education curriculum. The class of 1985 had the benefit of five classes with women cadets before them; the program had been modified to better meet the physiological needs of women cadets. When the class of 1990 went through the physical education program the focus of the physical performance of women had changed from can they do it to changing standards to ensure they truly were physically challenged.

However, there were several questions which lend themselves to direct comparisons between the classes. These questions center around the operational definition of effectiveness. Specifically, the extent to which the individual participant derived **satisfaction** from the physical education program; acquired fitness **knowledge** and skills; adopted a pattern of regular **participation** in fitness activities; and ultimately, observed a beneficial **impact** on the units to which the individual is assigned.

Satisfaction. The assumption can be made that the majority of the women from all three classes derived

satisfaction from the physical education program at West Point. The large number of positive comments (82% of the total) suggests that the women graduates were satisfied with the physical education program. Additionally, this is reflected somewhat in their increased interest in physical fitness since graduation (question 10). An overwhelming majority of the respondents from all three classes reported that their interest in personal fitness has increased since graduation. The class responses to this question are illustrated in percentages in Table 36.

Table 36

Increase in Interest in Personal Fitness Since Graduation by Percent of Class Response

| Class | Strongly Agree | Agree | Disagree | Strongly Disagree |
|---|---|---|---|---|
| 1980 | 34.7 | 40.8 | 18.4 | 6.1 |
| 1985 | 39.2 | 43.0 | 17.8 | 0.0 |
| 1990 | 41.8 | 47.3 | 9.1 | 1.8 |

An upward trend in the interest in physical fitness is supported by the class responses. Seventy-five percent of the respondents from the class of 1980 strongly agreed or agreed that their interest in personal fitness had increased since graduation. For the class of 1985, their percentage was 82; and for the class of 1990 it was 89.

Knowledge. Acquired knowledge and skills learned were mentioned repeatedly by respondents from all three classes. The categories of teaching for the class of 1985 and the importance of the Master Fitness Trainer program for the class of 1990 suggests that acquired knowledge was significant. Question 9 asked if they had received enough information on fitness while at the Military Academy. Table 37 illustrates the responses by class to that question.

Table 37

Belief That They Received Enough Fitness Information at USMA by Percent of Class Response

| Class | Strongly Agree | Agree | Disagree |
|---|---|---|---|
| 1980 | 28.6 | 46.9 | 24.5 |
| 1985 | 56.3 | 37.5 | 6.3 |
| 1990 | 61.8 | 34.5 | 3.6 |

Seventy-five percent of the women from the class of 1980 strongly agreed or agreed that they received enough fitness information while at USMA. The classes of 1985 and 1990 differ significantly from the class of 1980 in their response; 94% of the class of 1985, and over 96% of the women from the class of 1990, strongly agreed or agreed that they received enough fitness information. The strong

response from the class of 1990 is most likely the result of the Master Fitness Trainer program.

Participation. The amount of time devoted by the respondents each week to personal fitness speaks to a commitment to regular physical fitness activity. Table 38 illustrates the mean number of days and the mean amount of time spent per session as reported by the respondents.

Table 38

Mean Amount of Time Devoted Each Week to Working Out by Class

| Class | Days Per Week | Minutes Per Session |
|---|---|---|
| 1980 | 4.38 | 52.44 |
| 1985 | 4.36 | 55.88 |
| 1990 | 5.00 | 61.40 |

The area of fitness test scores is also presented for comparison. The women who were still active reported the total of their most recent APFT score (question 7e). Figure 7 illustrates the comparison of the scores between the classes.

The scores are broken down into ranges. The lowest range is 230-250. The class of 1980 had one person in this range, the class of 1985 had three and the class of 1990 had one respondent. In the 251-260 range the class of 1980 did not have any; the class of 1985 had one and the class

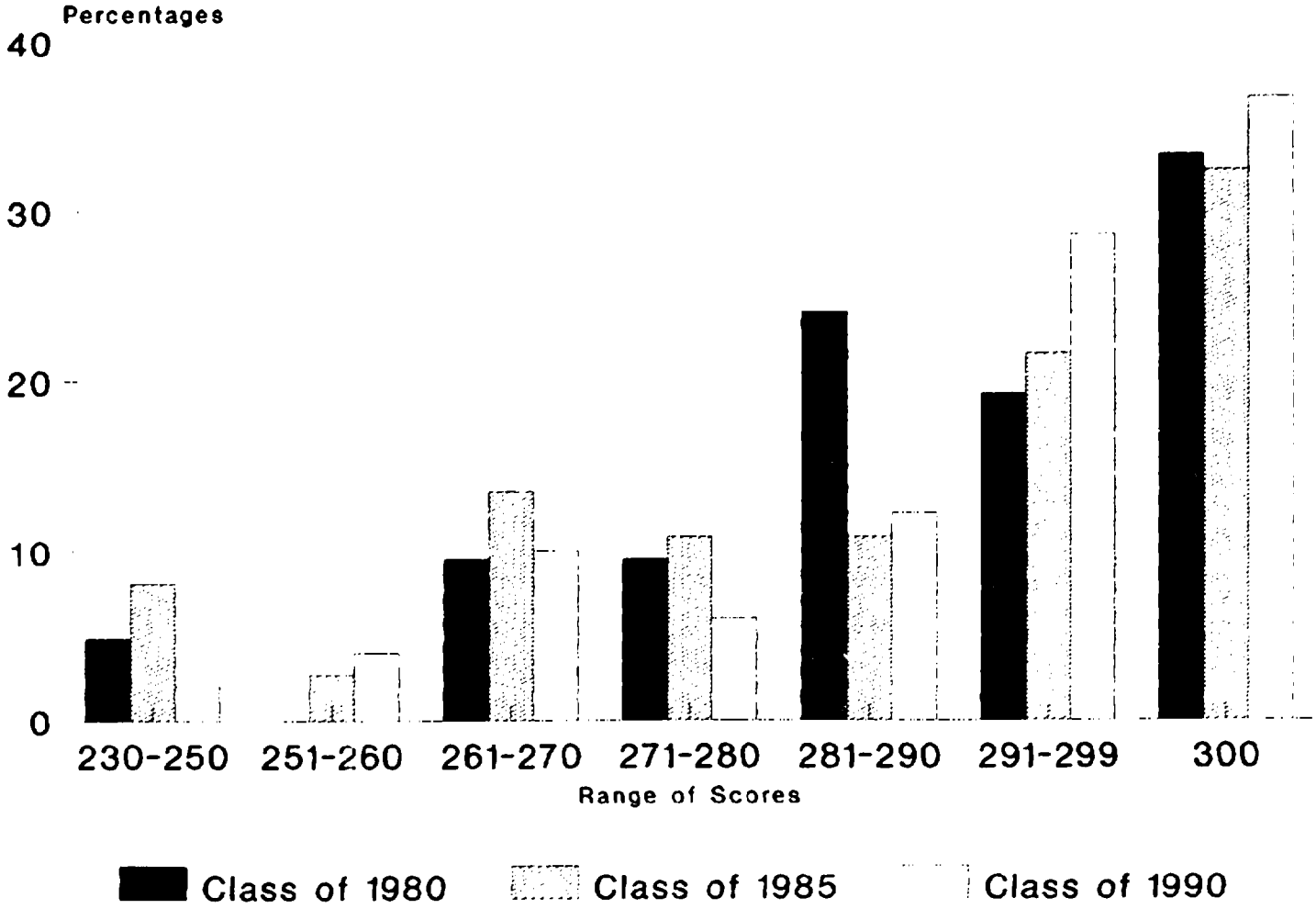


Figure 7. Comparison of Army Physical Fitness Test Scores Between Classes

of 1990 had two. In the 261-270 range the class of 1980 had two, the class of 1985 five, and the class of 1990 five. In the 271-280 range the class of 1980 had two, the class of 1985 four, and the class of 1990 three. Five from the class of 1980 scored in the 281-290 range; the class of 1985 had four; and the class of 1990 had six in this range. The class of 1980 had four in the 291-299 range, the class of 1985 six and the class of 1990, 14. All three classes had 300 as the most frequently reported score. Seven or 33% of the women from the class of 1980 had a 300 score. In the class of 1985, 12 or 32.4% reported scoring 300 on the APFT. The class of 1990 had 18 or 36.7% reporting a maximum score on the APFT.

It is important to note that each class falls into a different scoring standard for the APFT. The scoring standard is broken down by age. The mean age for the class of 1980 was 35; therefore they are scored in the 32-36 age category. The class of 1985 had a mean age of 30 falling into the age category of 27-31. Twenty-five was the mean age for the women from the class of 1990; they fall into the 22-26 age category. The varying standards for maximum scores for the different age groups are presented in Table 39.

Impact. The APFT scores were discussed in the section on participation; however, performance on the APFT could spill over into the area of impact. An outstanding performance or a poor performance by a leader could have a

Table 39

Standards for Maximum Scores for Three Women's Age Groups for the Army Physical Fitness Test

| Age Group | Push-Ups | Sit-Ups | 2 Mile Run |
|---|---|---|---|
| 22-26 | 56 | 85 | 15:36 |
| 27-31 | 54 | 80 | 17:00 |
| 32-36 | 52 | 75 | 18:36 |

positive or negative impact on how the soldiers within a unit view physical training.

Table 40 illustrates input to unit physical fitness programs (question 11). In each of the three classes less than half of the respondents who are in a position to provide input to a unit physical fitness program do so. The class of 1980 had a total of 40% who always or often provide input. The class of 1985 reported 44% providing input and the class of 1990 had 46% who provide input for their unit physical fitness program. While these data suggest a slight upward trend, it cannot be said to represent any significant difference among the three classes.

A follow up question was whether or not they believed their input had a positive impact (question 12). These responses are illustrated in Table 41; the results are reported in percentages.

Table 40

Input to Unit Physical Fitness Program by Percent of Class Response

| Class | Always | Often | Seldom | Never |
|---|---|---|---|---|
| 1980 | 15.0 | 25.0 | 30.0 | 30.0 |
| 1985 | 25.0 | 19.4 | 27.8 | 27.8 |
| 1990 | 20.8 | 25.0 | 31.2 | 22.9 |

Table 41

Positive Impact on Unit Physical Fitness Program by Percent of Class Response

| Class | Strongly Agree | Agree | Disagree | Strongly Disagree |
|---|---|---|---|---|
| 1980 | 6.7 | 80 0 | 6.7 | 6.7 |
| 1985 | 48.0 | 48.0 | 4.0 | 0.0 |
| 1990 | 24.3 | 64.9 | 10.8 | 0.0 |

While there were less than 50% providing input to their unit physical training program those who do provide input feel very strongly that they have a positive impact. Eighty-seven percent of the women from the class of 1980 who provide input feel that it has a positive impact. An impressive 96% of the women from the class of 1985 believe their input is positive and over 89% of the women from the class of 1990 believe their input has a positive impact.

A possible explanation for the difference between the class of 1980 and the classes of 1985 and 1990 is that the class of 1980 are field grade officers. Captains and Lieutenants are platoon leaders and company commanders; in these jobs they are in a position to have an impact on unit physical fitness training.

Follow-up Interviews

Following the completion of data analysis, telephone interviews were conducted in February 1994. The interviews were conducted to probe for additional information in certain areas identified by the researcher. The areas included were: importance of physical education for officer role; standards of the cadet APFT; eating disorders; and the attitudes of the DPE instructors.

Thirteen women graduates from the classes of 1980 (n=4), 1985 (n=5), and 1990 (n=4) were chosen to be interviewed. A series of questions were then asked.

The first question asked was: In your opinion which of the following experiences at USMA had the greatest impact on your role as an Army officer: academics, military training or physical education? Six (class of 1980, 2; class of 1985, 3; class of 1990, 1) of the interviewees said that their military training at West Point prepared them best for being an officer. Six (class of 1980, 2; class of 1985, 2; class of 1990, 2) said that their physical education had the greatest impact. One participant from the class of 1990 said military and physical education training had impacted equally.

The second question asked was: Do you think that cadet APFT standards should be the same as the Army's for age and gender, or should USMA have tougher standards for the cadet APFT? All 13 of the participants agreed that the physical testing standards for West Point should be tougher than the general Army standards.

A set of three questions which centered around eating disorders was asked. The first question was: In your opinion were eating disorders a problem for women cadets while you were at USMA? Eight women (class of 1980, 1; class of 1985, 4; class of 1990, 3) said that while they attended USMA eating disorders were a problem for women cadets. Two (class of 1980, 1; class of 1985, 1) of the women said eating disorders were not a problem; and three (class of 1980, 2; class of 1990, 1) said that they were not aware of eating disorders while they were cadets.

However, since graduating they have become aware that bulimia and anorexia were problems.

The second question asked was: Did you have an eating disorder? Three (class of 1980, 2; class of 1985, 1) of the women admitted to having had eating disorders while they were cadets. One graduate (class of 1980) told the researcher that prior to the interview she had never admitted having an eating disorder to anyone.

The third question asked was: Did any of your friends have eating disorders? Nine (class of 1980, 1; class of 1985, 5; class of 1990, 3) said they knew women with eating disorders while they were at USMA. One mentioned that her roommate at USMA was discharged from the Army because of an eating disorder. Four (class of 1980, 3; class of 1990, 1) did not know anyone with an eating disorder.

The final questions focused on the attitudes of the physical education instructors. The first question asked was: Based on your personal experience at USMA were the DPE instructors helpful? Ten (class of 1980, 2; class of 1985, 4; class of 1990, 3) of the participants said that the physical education instructors were helpful. One from the class of 1980 stated that they were not helpful, and one from each class said it depended on the instructor.

A second question about the DPE instructors was: Did you feel that the DPE instructors "were a haze?" One woman from the class of 1980 said yes. Eight (class of 1980, 2; class of 1985, 3; class of 1990, 3) said no. Four (class

of 1980, 1; class of 1985, 2; class of 1990, 1) said sometimes.

The responses to these interview questions confirmed that the physical education program has played an important role in their careers and that high testing standards are important and need to be maintained. It appears that the instructors within DPE have generally been helpful to women cadets and that their attitudes have not constituted a problem.

On the other hand, it appears that eating disorders have been a problem for some women cadets at the United States Military Academy. At an institution where the cadets are weighed twice each year and a sharp, professional appearance in uniform is stressed, it is not surprising that women may suffer from a poor self image and focus on their weight.

## Summary

This chapter has presented the findings and interpretations from the study. The data from the women graduates of the United States Military Academy from the classes of 1980, 1985, and 1990 were discussed in separate sections with each followed by a summary.

Descriptive tables were used to illustrate various demographic data, physical activity participation prior to and while attending USMA, current work-out frequency and duration, and APFT scores. The qualitative method of

content analysis was used to understand the participants' perceptions of their physical education experience at the Military Academy and of its impact on current values, beliefs and behaviors.

Increased self-confidence, excelling physically, increased credibility, and being a role model were mentioned most frequently by the women from the class of 1980 as having the greatest impact on their role as an Army officer. The class of 1985 also responded that self-confidence and excelling physically had impacted on their role as an Army officer; additionally, they noted the importance of being a role model and sharing fitness information with soldiers. For the participants from the class of 1990 increased self-confidence and the importance of the Master Fitness Trainer program have had the greatest impact on their young careers.

The importance of the benefits of fitness, self-confidence, teamwork, and a commitment to physical exercise were some of the values, beliefs and behavior changes noted most frequently by the class of 1980. A belief in the benefits of fitness was also mentioned most frequently by the class of 1985 along with self-confidence, and personal performance. For the class of 1990 the benefits of fitness and increased self-confidence were some of the values, beliefs and behaviors which they carry today.

All three classes reported being very physically active. The mean of the most recent Army Physical Fitness

Test score for the three classes was 286. The average current work-out frequency and duration for the three classes combined is 4.6 days per week for 56.6 minutes per session.

Some of the responses of the three classes were compared in tables. The items which were used in direct comparison included: interest in personal fitness since graduation; workout frequency and duration; information about fitness received while at USMA; APFT scores; input to unit physical fitness program; and the impact of the input provided.

Telephone interviews were conducted to probe for additional information. Information about the importance of their physical education training, cadet APFT testing standards, eating disorders, and attitudes of DPE instructors were discussed.

Analysis of the data suggests that the women graduates of the United States Military Academy who participated in this study were satisfied with the physical education program; acquired fitness knowledge and skills; participate regularly in physical activities; and have a beneficial impact on the physical training programs of the units to which they are assigned. The data from this study indicate that the physical education curriculum at the United States Military Academy is effective in preparing its women graduates for their role as Army officers and leaders, in

terms of the four designated criteria of effectiveness: satisfaction, knowledge, participation, and impact.

# Chapter 5

# SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

## Summary

The purpose of this study was to examine the effectiveness of the physical education curriculum of the United States Military Academy in the preparation of women graduates for their role as Army officers and leaders.

Historical research was conducted to answer the first research question concerning curriculum changes since 1976 in the Department of Physical Education. Primary and secondary sources were utilized and a site visit was made to West Point by the researcher.

A three-part survey instrument was developed by the researcher to examine the second research question relating to the perceptions of women graduates of the effectiveness of the Department of Physical Education curriculum. Subjects for the study were 185 women graduates of the United States Military Academy. The subjects were from the class of 1980 (n=50), the class of 1985 (n=80), and the class of 1990 (n=55). Data were analyzed using descriptive statistics and content analysis. Results were reported with regard to each of the two research questions.

Research Question One

What major changes have occurred in the curriculum within the Department of Physical Education as a result of the admission of women in 1976?

The staff and faculty at USMA had less than a year to prepare for the arrival of women. Very little research was available on the topic of the potential physical abilities of women. Following a study of high school age women conducted by the Department of Physical Education, some modifications were made to the curriculum. However, it was not until after the women arrived and began to experience the curriculum that a real understanding of the physical capabilities of women began.

Changes in Cadet Basic Training included wearing t-shirts at all times during training; the women carried the lighter M-16 rifle; fewer hills were run; and ability groups were formed.

The only courses added because of the admission of women were Self Defense I and Self Defense II; these were in lieu of the required wrestling and boxing courses taken by the men. In the intramural program, women were not allowed to participate in contact sports. The Indoor Obstacle Course Test was changed; the parallel bar walk was eliminated for all cadets and replaced by the balance beam walk and the tire run. Testing standards have been changed on a regular basis as the women continue to meet and exceed the established standards. In 1991, the grading standard

of one event in the cadet physical fitness test was changed. The sit-up requirement for women was adjusted; now the women have to do more sit-ups than the men to receive the same score. Women have a lower center of mass and tend to perform better on sit-ups when compared to men.

Research Question Two

What are the perceptions of the women graduates in the classes of 1980, 1985, and 1990 concerning the physical education curriculum and the related experiences encountered in preparation for their role as Army officers and leaders?

Eighty percent of the women who received a copy of the survey instrument participated in this study. In determining their perceptions about the physical education curriculum at USMA content analysis was used. An operational definition of effectiveness was developed which focused on the participant's satisfaction from the program; acquired fitness knowledge and skills; regular participation in physical activities; and an awareness of the beneficial impact by the unit to which the individual is assigned.

Analysis of the data indicated that the majority of women graduates surveyed were satisfied with the physical education curriculum at USMA. The comments made in the open-ended questions were largely positive for all three classes. Seventy-nine percent of the comments from the

women of the class of 1980 were positive. Ninety-eight percent of the responses from the classes of 1985 and 1990 were positive. The women discussed repeatedly the fitness knowledge and skills learned in addition to an understanding of the benefits of fitness in their lives.

All of the respondents are currently leading physically active lifestyles; the mean amount of time engaged in physical activities for these three classes combined is 4.6 days per week for 56.6 minutes per session. Additionally, many noted several activities in which they engaged because of their physical education experience at USMA. Not all of these women were given the opportunity to provide input to their units' physical fitness programs, but when they did the reaction was positive.

The implementation of the Master Fitness Trainer program in 1987 was an important addition to the physical education curriculum. However, it was not added because of the women, rather it was to provide the Army with officers who were highly trained in the area of physical readiness. Twenty-five percent of the women graduates from the class of 1980 did not believe that they received adequate information about fitness while they were cadets, however 94% of the women from the class of 1985 and 96% of the women from the class of 1990 believe that they received enough fitness information. The Master Fitness Trainer program which provides cadets with a broad range of fitness information and which was implemented at USMA in 1987, was

remarked on enthusiastically by many members of the class of 1990.

## Conclusions

Based on the findings of this study the following conclusions appear to be warranted:

1. The changes that have been made to the physical education curriculum at the United States Military Academy as a result of the admission of women in 1976 have been few.

2. The women cadets at the United States Military Academy continue to meet and exceed the physical testing standards. The upper limits of physical performance for women at USMA has yet to be determined.

3. The physical education curriculum at the United States Military Academy is effective in preparing the majority of women graduates for their role as Army officers and leaders.

4. The operational definition of effectiveness (satisfaction, knowledge, participation, and impact) proved to be a useful framework in which to evaluate the curriculum.

5. This impact study demonstrated through the use of the participants perspective that it can be a useful approach when trying to determine the actual effect a curriculum has on its students years after they have graduated.

## Recommendations for the United States Military Academy Department of Physical Education Curriculum

The participants in this study were asked what changes they would make to the physical education curriculum at the United States Military Academy (question 23). Tables 42, 43, and 44 reporting their recommendations are in Appendix I.

The participants from the class of 1980 made suggestions (Table 42) which were grouped into the categories of knowledge, lifetime sports, attitude change of Department of Physical Education instructors, and eliminating certain aspects of the program. In the category of knowledge they recommended that there be more information about nutrition, physiological differences, sports medicine, and stress management. All of these areas are now addressed in the classes taken as part of the Master Fitness Trainer course. The women from the class of 1980 also recommended more emphasis on lifetime sports and ability groups. Currently there are 33 electives offered for cadets during the academic year. Many of those courses are lifetime sports. Some of the courses offered are: aerobic dance, applications of running, badminton, bicycling, bowling, golf, handball, racquetball, downhill skiing, cross country skiing, strength development, squash, and tennis. Additionally, there are many opportunities to continue to pursue lifetime sports within the intramural and club sports programs.

The attitude of DPE instructors was also noted by eight of the participants and three noted that there was too much concern about weight. In the telephone interviews there was a question which directly related to the attitude of the DPE instructors; the majority of those interviewed said that the instructors did not give them a hard time.

The elimination of the Indoor Obstacle Course Test (IOCT), running in boots, combatives, and pull-up testing from the physical education program were suggested. Running in boots has been eliminated. The elimination of the other items is not in the best interest of future Army officers. The IOCT and pull-up testing are important evaluation tools and the combatives courses provide cadets with useful self defense skills.

The class of 1985 also recommended many changes (Table 43). The categories included adding a Master Fitness Trainer Program, more fitness activities, eliminate items in the curriculum, more knowledge, and the attitude of DPE instructors.

Learning how to develop a personal fitness program, developing a unit fitness program, physical training for special populations, injury prevention and making physical training informative and fun were all placed under the category of adding a Master Fitness Trainer Program. All of these recommendations have been incorporated into the Master Fitness Trainer program as currently taught.

Within the category of more fitness activities, the women suggested weight training for all women, more emphasis on lifetime sports, organized physical training during the academic year, and the mental benefits of fitness. Weight training is not required for all women; however, there is a strength development course offered as an elective. As stated previously, there are currently numerous lifetime sports available to the cadets within the electives. Organized physical training is impractical at USMA because the cadets have very long days during the academic year; their time is carefully guarded to maintain the minimum essential time essential for study. The addition of daily physical training would add at least an hour to an already full schedule.

The elimination of grading, running in boots, clicker boards, and the IOCT were suggested by some women from the class of 1985. The cadets will continue to be graded in courses and physical fitness tests, especially since physical training accounts for 15% of their GPA.

It is important to note that 17 of the respondents recommended that no changes be made to the physical education curriculum.

The women in the class of 1990 also had recomendations for change (Table 44). Suggested changes included the categories of fitness, eliminate, knowledge, and attitude of DPE instructors. Nine of the women recommended that the physical education program not be changed.

Most of their suggestions were also offered by members of the classes of 1980 and 1985 and have been addressed above. Within the category of fitness, two suggested that cadets administer their own physical training program; since cadets do not have organized physical training, ultimately they are responsible for their individual programs.

The physical education curriculum at the United States Military Academy appears to be effective. However, after analysis of the data and taking into consideration the recommendations of the graduates, the following changes are recommended by the researcher to make the physical education curriculum even more effective in meeting the needs of its graduates and the Army:

1. Communicate with USMA graduates and the Army community more effectively, so that they will be more aware of changes which have been implemented within the Department of Physical Education curriculum.

a. It was evident by some of the responses that some graduates are not aware of the changes which occurred within the Department of Physical Education curriculum. This was apparent with the recommendation that boots no longer be worn for physical training and adding the Master Fitness Trainer program to the curriculum. It is important for graduates to be aware of the USMA programs so that they can inform other Army officers of the changes. Assembly, the USMA alumni magazine which is published bi-monthly is

the forum in which most graduates could be informed of recent changes and initiative within DPE.

b. Army personnel need more information about the Master Fitness Trainer program at USMA and the benefits which can be gained if these officers are utilized. Each year over 900 young, eager second lieutenants who have earned the Master Fitness Trainer identifier graduate from USMA. During their four years as cadets these lieutenants have received a large amount of fitness information in areas such as: human anatomy, muscle physiology, strength development, exercise physiology, cardiorespiratory fitness, nutrition, exercise adherence, aerobic/anaerobic fitness, exercising to music, circuit training, interval training, unit fitness, and individual fitness. Commanders in Army units need to be made aware that their officers may be useful in improving the units' fitness program.

2. Provide more information about good nutrition habits and their importance in a healthy lifestyle.

a. The cadets do receive nutrition information as part of the Master Fitness Trainer program. However, there will be concern, especially on the part of women, about weight in an environment in which fitness, health and looking sharp in uniform is stressed. Eating disorders surfaced as a problem in the initial analysis of the data (one graduate wrote the researcher a separate letter stressing the eating disorder problem for women cadets). After talking with some of the participants of this study

it was apparent that many women cadets had experienced eating disorders or have friends who had an eating disorder while they were cadets.

b. The staff, faculty, and coaches at USMA need to be aware of the signs of eating disorders in order to assist cadets with problems.

c. The women officers assigned to USMA could provide a non-threatening, informal forum in which women may share their own experiences with eating disorders and successful ways to deal with them.

3. Assist the instructors within the Department of Physical Education in becoming more aware of the way they communicate with cadets.

a. Participants from all three classes noted that DPE instructors can be a "haze." (Haze is a term used by cadets to indicate that someone is giving them a hard time.) Instructors need to be in the business of instructing, not hazing. It is important to note that some women from the class of 1980 recalled remarks made to them in 1976; eighteen years later they still remembered unflattering or sarcastic comments by some of the DPE instructors.

b. Time could be set aside during officer professional development sessions to educate the instructors on the most productive way to communicate with cadets. Many of the officers within DPE are combat arms officers; they do not have women in their units. As such,

these men have had few opportunities to work with women soldiers. They need to be exposed to acceptable ways to communicate with women cadets.

4. Establish a standing curriculum committee in the Department of Physical Education which will review the overall curriculum on an annual basis.

a. An annual review of the curriculum will ensure that it does not become stale or outdated. Each year new officers arrive in the department with fresh ideas; inviting new arrivals to curriculum meetings would allow for the sharing of those ideas.

b. New and innovative sports and games are introduced to the American public each year; cadets at the Military Academy should be afforded the opportunity to be exposed to new physical activities and games which are not fads.

5. Emphasize the importance of lifetime sports and activities.

a. Cadets are introduced to lifetime sports within the elective, intramural, and club sports programs. Information on the importance of lifetime sports needs to receive greater emphasis. Because cadets are young and are not thinking about the types of physical activities they will participate in when they are older, they need to be reminded.

b. Review the electives currently offered and possibly add more lifetime activities to the program.

## Recommendations for Future Research

Based on this study, the following recommendations for future physical education curriculum research entailing the effectiveness of college physical education programs are suggested:

1. Continue to survey graduates, both men and women, of the United States Military Academy to determine the effectiveness of the physical education curriculum.

2. Revise the questionnaire for use in future related longitudinal research studies. The information would be collected in three phases.

a. Phase I: Obtain the information about their physical activity participation during their Plebe year. This may also be helpful in guiding cadets in the selection of electives, intramurals, and club sports.

b. Phase II: Collect the information about their physical education experiences while at USMA during the second semester of their senior year.

c. Phase III: Five years after graduation, collect demographic data and the information about the graduates' perception of the physical education program.

d. Try to determine the variables which had either a positive or negative impact on their behavior change toward physical activity.

3. In future follow-up studies make every effort to decrease the number of incorrect mailing addresses. This can be accomplished through coordinating the timing of the

receipt of the addresses and the actual mailing so that there is not a long delay. Also, have the mailing occur during the spring, prior to the large number of summer moves.

4. Evaluation of school physical education programs should place more emphasis on impact studies. The use of the operational definition of effectiveness as defined in this study is recommended.

## REFERENCES


Adams, T. M., & Brynteson, P. (1992). A comparison of attitudes and exercise habits of alumni from colleges with varying degrees of physical education activity programs. Research Quarterly for Exercise and Sport, 63(2), 148-152.

Athletic Business (1984, June). Fitness in the military taking on a new look, pp. 28-32.

Brynteson, P., & Adams, T. M. (1993). The effects of conceptually based physical education programs on attitudes and exercise habits of college alumni after 2 to 11 years of follow-up. Research Quarterly for Exercise and Sport, 64(2), 208-212.

Courtenay, B., & Holt, M. E. (1990). Using impact evaluations to improve marketing plans in continuing education. Continuing Higher Education, 38(1): 10-15.

Degen, R. (1968). The Evolution of Physical Education at the United States Military Academy. United States Military Academy, West Point, New York.

Department of the Army (1984). The Family Fitness Handbook (DA PAM 350-21). Washington, D.C.: U.S. Government Printing Office.

Department of the Army (1982). Physical Readiness Training (FM 21-20). Washington, D.C.: U.S. Government Printing Office.

Department of the Army (1985). The Army Physical Readiness Program (AR 350-15). Washington, D.C.: U.S. Government Printing Office.

Department of the Army (1983). The Individuals Handbook on Physical Fitness (DA PAM 350-18). Washington, D.C.: U.S. Government Printing Office.

Department of the Army Form 71 (August 1959). Oath of office-military personnel.

Department of the Army (1963, March). Training Circular Number 21-1.

Department of Defense (1982, January). Military manpower statistics. Women military personnel on active duty by grade in which serving, Table 25.6. Washington, D.C.: Government Printing Office.

Department of Defense (1983, January). Military manpower statistics. Women military personnel on active duty by grade in which serving, Table 25.6. Washington, D.C.: Government Printing Office.

Department of Defense (1984, January). Military manpower statistics. Women military personnel on active duty by grade in which serving, Table 25.6. Washington, D.C.: Government Printing Office.

Department of Defense (1985, January). Military manpower statistics. Women military personnel on active duty by grade in which serving, Table 25.6. Washington, D.C.: Government Printing Office.

Department of Defense (1986, January). Military manpower statistics. Women military personnel on active duty by grade in which serving, Table 25.6. Washington, D.C.: Government Printing Office.

Department of Defense (1987, January). Military manpower statistics. Women military personnel on active duty by grade in which serving, Table 25.6. Washington, D.C.: Government Printing Office.

Department of Defense (1988, January). Military manpower statistics. Women military personnel on active duty by grade in which serving, Table 25.6. Washington, D.C.: Government Printing Office.

Department of Defense (1989, January). Military manpower statistics. Women military personnel on active duty by grade in which serving, Table 8. Washington, D.C.: Government Printing Office.

Department of Defense (1990, January). Military manpower statistics. Women military personnel on active duty by grade in which serving, Table 8. Washington, D.C.: Government Printing Office.

Department of Defense (1991, January). Military manpower statistics. Women military personnel on active duty by grade in which serving, Table 8. Washington, D.C.: Government Printing Office.

Department of Defense (1992, January). Military manpower statistics. Women military personnel on active duty by grade in which serving, Table 8. Washington, D.C.: Government Printing Office.

Department of Defense (April, 1992). Appendix R, Role of women in the theater of operations. Conduct of the Persian Gulf War. pp. 647-649.

Dillman, D. A. (1978). Mail and telephone surveys: The total design method. New York: Wiley-Interscience.

Drews, F. R. (1984). The Army's high priority physical fitness program. Journal of Physical Education, Recreation and Dance, 48-50.

Eisner, E. W., & Vallance, E. (Eds.). (1974). Conflicting conceptions of curriculum. Berkeley, CA: McCutchan.

Ennis, C. D. (1990). Analyzing curriculum as participant perspectives. Journal of Teaching in Physical Education, 9, 79-94.

First women take off. (1993, May 17). Army Times, p. 2.

Forsythe, G. B. (1992). Military education. In M. C. Alkin (Ed.), Encyclopedia of educational research (pp. 844-851), (6th ed.). New York: MacMillian.

Goldman, N. (1973). The changing role of women in the armed forces. American Journal of Sociology, 78(4), 892-911.

Goldstein, J. E. (1983). Fitness = wellness: The new military education. Parks and Recreation, 18, 36-40.

Guba, E. G., & Lincoln, Y. S. (1981). Effective evaluation: Improving the usefulness of evaluation results through responsive and naturalistic approaches. San Francisco: Jossey-Bass.

Hall, R. (1990). They all fought at Bull Run. Minerva: Quarterly Report, 9(3), 48-54.

Hammond, H. S. (1992). Women at West Point: An update. Assembly, 51(2), 33-37.

Holm, J. (1982). Women in the military: An unfinished revolution. California: Presidio.

Holsti, O. (1969). Content analysis for the social sciences and humanities. Reading, MA: Addison-Wesley.

Holt, M. E., & Courtenay, B. C. (1985). An examination of impact evaluations. Continuum, 49(1), pp 23-35.

Jewett, A. E. (1987). Historical background. In A. E. Jewett & L. L. Bain (Eds.), The purpose process curriculum framework: A personal meaning model for physical education. Special Monograph Journal of teaching in physical education, 6(3), pp. 195-366.

Jewett, A. E., & Bain, L. L. (1985). The curriculum process in physical education. Dubuque, IA: Brown.

Kirkpatrick, D. L. (1983). Four steps to measuring training effectiveness. Personnel Administrator, 28(6), 19-25.

Larson, L. A. (1981). Physical assessments: United States Military Academy (50 Year Chronology: 1930-1980). United States Military Academy, West Point, New York.

Matthews, W. (1993, February 15). Budget war: Aspin drops $2.5 billion bomb. Army Times, pp. 3, 6.

Minimum/maximum scores for Army physical fitness test. (1985, November). Army Times, p. 30.

Mitchell, B. (1989). Weak link: The feminization of the American military. Washington: Regnery Gateway.

Moore, D. S., & McCabe, G. P. (1989). Introduction to the practice of statistics. New York: W.H. Freeman and Company.

National Association for Sport and Physical Education. (1992). Outcomes of quality physical education programs. Reston, VA: American Alliance for Health, Physical Education, Recreation and Dance.

Oxendine, J. B. (1961). The service program in 1960-61. Journal of Physical Education and Recreation, 32(7), 37-38.

Oxendine, J. B. (1969). Status of required physical education programs in colleges and universities. Journal of Health Physical Education and Recreation, 40(1), 32-35.

Oxendine, J. B. (1972). Status of general instruction programs of physical education in four-year colleges and universities: 1971-1972. Journal of Health, Physical Education and Recreation, 43(3), 26-28.

Oxendine, J., & Roberts, J. (1978). The general instruction program in physical education at four-year colleges and universities: 1977. Journal of Physical Education and Recreation, 49(1), 21-23.

Patton, M. Q. (1990). Qualitative evaluation and research methods (2nd ed.). Newbury Park, CA: Sage.

Peterson, J. A., Vogel, J. A., Koval, D. M., & Tomasi, L. F. (1976). Project 60: A Comparison of Two Types of Physical Training Programs on the Performance of 16-18 Year-Old Women. United States Military Academy, West Point, New York.

Priest, R. F., Vitters, A. G., & Prince, H. T. (1978). Coeducation at West Point. Armed Forces and Society, 4(4), 589-606.

Remley, M. L. (1992). Physical education at the United States Military Academy 1962-1992, unpublished manuscript.

Safrit, M. J. (1981). Evaluation in physical education (2nd ed.). New Jersey: Prentice-Hall.

Safrit, M. J. (1986). Introduction to measurement in physical education and exercise science. St. Louis: Times Mirror.

Schubert, W. H. (1986). Curriculum: Perspective, paradigm, and possibility. New York: MacMillian.

Scriven, M. (1967). The methodology of evaluation. In Tyler, R., Gagne, R. & Scriven, M. (Eds.), Perspectives on curriculum evaluation (pp. 39-83). Chicago: Rand McNally.

Shenon, P. (1991, February 24). At combat's doorstep, she confronts peril and male doubt. New York Times, p. B3.

Statistical Abstract of the United States (1960). U.S. Department of Commerce. Washington, DC: U.S. Government Printing Office.

Statistical Abstract of the United States (1970). U.S. Department of Commerce. Washington, DC. U.S. Government Printing Office.

Statistical Abstract of the United States (1974). U.S. Department of Commerce. Washington, DC. U.S. Government Printing Office.

Statistical Abstract of the United States (1976). U.S. Department of Commerce. Washington, DC. U.S. Government Printing Office.

Statistical Abstract of the United States (1992). U.S. Department of Commerce. Washington, DC. U.S. Government Printing Office.

Stauffer, R. (1976). Comparison of United States Military Academy Men and Women on Selected Physical Performance Measures "Project Summertime". United States Military Academy, West Point, New York.

Struna, N. L. (1990). Historical research. In J. R. Thomas & J. K. Nelson (Eds.), Research methods in physical activity (pp. 201-220). Champaign, IL: Human Kinetics.

Sullivan, J. F. (1991, March 7). Army pilot's death stuns her New Jersey neighbors. New York Times, pp. B1, 4.

Terry, D. (1991, February 28). Scud's lethal hit takes first 3 female soldiers. New York Times, p. B1.

Trimble, R. T., & Hensley, L. D. (1984). The general instruction program in physical education at four-year colleges and universities: 1982. Journal of Physical Education, Recreation and Dance, 55(5), 82-89.

Trimble, R. T., & Hensley, L. D. (1990). Basic instruction programs at four-year colleges and universities: Course offerings and administration. Journal of Physical Education, Recreation and Dance, 62(6), 69-73.

U.S. Army Soldier Support Center (1983). The individual's handbook of physical fitness (DA PAM 350-18). Washington, D.C.: U.S. Government Printing Office.

U.S. News & World Report, (1990, January), 108(2), 12. A fresh shot at full equality.

U.S. women to become war pilots. (1993, April 28). The Atlanta Constitution, p. 1.

United States Corps of Cadets Circular 28-1 (1987-88).

United States Corps of Cadets Circular (1990-91).

U.S. Department of Education (1988). Nationally recognized agencies and associations (OMB No. 1840-0607). Washington, D. C.: U.S. Government Printing Office.

United States Military Academy, Fact Sheet (December 1975). Subject: Admission of women to the United States Military Academy. Public Affairs Office, United States Military Academy.

United States Military Academy (1977). Information for women candidates. West Point, New York. (ERIC Document Reproduction Service No. ED 155 987)

United States Military Academy 1986-1987 Catalog.

United States Military Academy 1992-1993 Catalog.

United States Military Academy, Memorandum for Record (28 October 1976). Subject: Changes in 1976 CBT summer physical education program. Department of Physical Education.

United States Military Academy, Department of Physical Education Syllabus 1976, West Point, New York.

United States Military Academy (1977). Department of Physical Education, Testing Office. Unpublished raw data.

United States Military Academy (1978). Department of Physical Education, Testing Office. Unpublished raw data.

United States Military Academy (1979). Department of Physical Education, Testing Office. Unpublished raw data.

United States Military Academy, Department of Physical Education Syllabus 1980, West Point, New York.

United States Military Academy (1981). Department of Physical Education, Testing Office. Unpublished raw data.

United States Military Academy (1982). Department of Physical Education, Testing Office. Unpublished raw data.

United States Military Academy (1983). Department of Physical Education, Testing Office. Unpublished raw data.

United States Military Academy (1984). Department of Physical Education, Testing Office. Unpublished raw data.

United States Military Academy, Department of Physical Education Syllabus 1984, West Point, New York.

United States Military Academy, Department of Physical Education Testing Booklet, Academic Year 1986-1987, West Point, New York.

United States Military Academy (1986). Department of Physical Education, Testing Office. Unpublished raw data.

United States Military Academy (1987). Department of Physical Education, Testing Office. Unpublished raw data.

United States Military Academy (1988). Department of Physical Education, Testing Office. Unpublished raw data.

United States Military Academy, 2002: A Road Map to Our Third Century. (1988). United States Military Academy, West Point, New York.

United States Military Academy (1989). Department of Physical Education, Testing Office. Unpublished raw data.

United States Military Academy, Memorandum on the Indoor Obstacle Course Test Standards (1990, June). Department of Physical Education United States Military Academy.

United States Military Academy, Memorandum (3 December 1990). Subject: Adjusted sit-up scale for women. Department of Physical Education, United States Military Academy.

Worthen, B. R., & Sanders, J. R. (1987). Educational evaluation. New York: Longman.

# Appendix A

Letter to Lieutenant General Howard D. Graves

MAUREEN K. LEBOEUF
240 West Huntington Road
Bogart, GA 30622-1749
(404) 369-1826

6 March 1992

Lieutenant General Howard D. Graves
Superintendent
United States Military Academy
West Point, New York 10996

Dear General Graves:

Sir, last year I was selected to return to the Military Academy as a Permanent Professor in the Department of Physical Education. Currently, I am pursuing my doctorate at the University of Georgia and I am in the process of planning my dissertation project. My goal is to produce a product that will contribute to the Department of Physical Education and to the Army.

I plan to look at the evolution of the physical education program at West Point from its inception to today. As the future Director of Instruction in DPE I believe it is important for me to understand the historical development of the curriculum. Additionally, I want to evaluate the physical fitness test scores of the women cadets from the classes of '80, '85, and '90, possibly comparing their 4th class and 1st class scores. I am also planning to develop and send a questionnaire to these women to inquire about current fitness test scores and fitness activities.

I will have to work with and secure data from several departments within the West Point community. I anticipate having to talk with Admissions, Association of Graduates, Department of Physical Education, and the Office of Institutional Research. Sir, I would like your approval so that I may begin to gather information and data. I have already touched base with COL Anderson and Dr. Remley in DPE. My major professor here at UGA is Dr. Ann Jewett, who served as a Visiting Professor in DPE at USMA from 1986-87 and is very enthusiastic about my proposal. I appreciate your time and consideration for my proposal.

Beat Navy!

MAUREEN K. LEBOEUF
MAJ, AV
United States Army

# Appendix B

## Letter From Colonel Patrick A. Toffler

DEPARTMENT OF THE ARMY
UNITED STATES MILITARY ACADEMY
WEST POINT, NEW YORK 10996

REPLY TO
ATTENTION OF

April 1, 1992

Major Maureen K. LeBoeuf
240 West Huntington Road
Bogart, GA 30622-1749

Dear Major LeBoeuf:

This letter confirms our conversation of 1 April 1992. We certainly look forward to working with you on your doctoral dissertation. Your topic is timely and important.

We have considerable background documentation, data, and some research available on the physical performance of women as candidates and cadets. However, a thorough study of their performance trends and useful insights from women graduates are lacking. So, your work will make an important contribution.

Again, we welcome the opportunity to support your efforts. Please feel free to contact me (914-938-2803/2614), when you are ready to begin your research and data collection.

Sincerely,

Patrick A. Toffler
Colonel, U.S. Army
Director of Institutional Research

CF: DPE
DAD
AOG
C/S

# Appendix C

## Survey Instrument

**Questionnaire on the Department of Physical Education Curriculum at the United States Military Academy Women Graduates from the Classes of 1980, 1985 and 1990**

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**Part I: Please respond to questions 1-7 by circling or writing in the appropriate response:**

1. In what year did you graduate?

    1. 1980
    2. 1985
    3. 1990

2. What is your current status?

    1. Active Duty
    2. Active Reservist
    3. National Guard
    4. Civilian
    5. Individual Ready Reserve

3. Age_____

4.a. Are you married?

    1. YES
    2. NO

4.b. If you answered YES to 4.a.: Are you married to a service member?

    1. YES
    2. NO

5. Are you a Master Fitness Trainer?

    1. YES
    2. NO

6. If you are no longer in the Army when did you resign? Please give year.

_____

7. If still on active duty, in the active reserves, or in the National Guard provide the following information:

a. Branch _____

b. Rank _____

c. Type of unit to which currently assigned _____

d. Job title_____

e. Score on last APFT (total out of 300) _____

**Part II: Please circle the number which corresponds to the most appropriate response to questions 8-16:**

8. Do you believe that being in good physical condition is an important part of being a soldier?

1. Strongly Agree
2. Agree
3. Disagree
4. Strongly Disagree

9. Do you believe that you received enough information/knowledge about fitness while you were at USMA?

1. Strongly Agree
2. Agree
3. Disagree
4. Strongly Disagree

10. Has your interest in personal fitness increased since graduation?

1. Strongly Agree
2. Agree
3. Disagree
4. Strongly Disagree

**If you are no longer in the Army, go directly to question 18, Part III**

11. Do you provide input for your present unit's physical training program?

1. Always
2. Often
3. Seldom
4. Never

12. If you do provide some input: Do you think your input has a positive impact on the unit's physical training program?

1. Strongly Agree
2. Agree
3. Disagree
4. Strongly Disagree

13. Did you deploy in support of Operation Desert Shield/Storm?

1. YES
2. NO

**Answer questions 14-17 only if you responded YES to question 13. If you answered NO to question 13, move directly to Part III (question 18).**

14. The following best describes my physical condition prior to deployment.

1. Excellent
2. Good
3. Fair
4. Poor

15. Physical conditioning played an important part in my deployment.

1. Strongly Agree
2. Agree
3. Disagree
4. Strongly Disagree

16. I was able to maintain my physical fitness during deployment.

1. Strongly Agree
2. Agree
3. Disagree
4. Strongly Disagree

17. How did you maintain your physical fitness during deployment? (Please write a response)

**Part III: Please respond in writing to the following questions:**

18. What types of physical activities did you engage in prior to entering the United States Military Academy?

19. What physical activities did you engage in while at USMA? (Identify the particular sports.)

Corps Squad Intramurals Club Sports

20. What experiences in physical education at the United States Military Academy have impacted on your role as an Army officer?

21. What values, beliefs or behavior changes do you carry with you today as a result of your physical education experience at the Military Academy?

22. What types of physical activities do you engage in today as a result of your physical education experience at the Military Academy?

23. In retrospect, what changes could be made in the physical education program at USMA that would have been of greater benefit to you?

24.a. Please circle the number which best describes the number of days each week that you participate in physical activities?

1 2 3 4 5 6 7

24.b. How long does each session last? (Please write in minutes)

_____ minutes

**Thank you for your time!**

# Appendix D

## Survey Instrument Cover Letter

**MAUREEN K. LEBOEUF**
**240 West Huntington Road**
**Bogart, GA 30622-1749**
**(706) 369-1826 (H)**
**(706) 542-4210 (W)**

17 August 1993

Dear West Point Graduate:

In 1991, I was selected to return to the United States Military Academy as a Permanent Professor in the Department of Physical Education (DPE). I will be assigned as the Director of Instruction for DPE. (I taught in DPE from 1986-88.)

Prior to reporting to West Point I must obtain a doctoral degree. Currently I am at the University of Georgia working on my doctorate in Curriculum and Instruction in Physical Education. A major requirement of the degree is the writing of the dissertation. The focus of this research is the evaluation of the DPE curriculum.

I know you are busy; however, I would appreciate it if you would take the time to complete and return the enclosed questionnaire. Responding to the questionnaire is completely voluntary and confidential. Your response will not be released in any individually identifiable form without your prior consent unless otherwise required by law. The questionnaire has an identification code for mailing purposes only. This is so that I can check your name off the mailing list when your questionnaire is returned. That way you will not be inconvenienced by follow up mailings. There is no foreseen risk in your participation.

I am excited about my research. However, I cannot be successful without your input. Once you complete the questionnaire please return it to me in the postage paid envelope which is provided. I have also enclosed a card with which you can volunteer to be interviewed over the phone. If you would like to be interviewed please complete the card and return it with your questionnaire.

I thank you for your time and interest in this research. If you have any questions or comments please do not hesitate to give me a call.

MAUREEN K. LEBOEUF
LTC, AV
United States Army

Research at The University of Georgia which involves human participants is carried out under the oversight of the Institutional Review Board. Questions or problems regarding your rights as a participant should be addressed to Heidi L. Roof, M.S., or Dr. C. Moriarty; Institutional Review Board; Office of V.P. for Research; The University of Georgia, 604A Graduate Studies Research Center; Athens, Georgia 30602-7411, Telephone (706) 542-6514.

# Appendix E

## First Follow-up Letter

**MAUREEN K. LEBOEUF**
**240 West Huntington Road**
**Bogart, GA 30622-1749**
**(706) 369-1826 (H)**
**(706) 542-4210 (W)**

23 August 1993

Dear West Point Graduate:

A few days ago I mailed you a questionnaire seeking your perceptions about the United States Military Academy Department of Physical Education curriculum.

If you have already completed and returned it to me **thank you**. If not, please take some time and do it today. Your opinion is important to the success of my survey.

If you did not receive the questionnaire or it was misplaced, please call me collect (706)369-1826 and I'll send you another copy.

Thanks again for your time.

MAUREEN K. LEBOEUF
LTC, AV
United States Army

# Appendix F

## Second Follow-up Letter

**MAUREEN K. LEBOEUF**
**240 West Huntington Road**
**Bogart, GA 30622-1749**
**(706) 369-1826 (H)**
**(706) 542-4210 (W)**

28 September 1993

Dear West Point Graduate:

About six weeks ago I wrote to you seeking your opinion about the physical education curriculum at the United States Military Academy (USMA). As of today I have not yet received your completed questionnaire.

I have undertaken this study because I believe it is important to evaluate the curriculum from the participants perspective. You have been away from the Military Academy and can now reflect and determine if you have found the fitness information and sports skills you received at USMA useful.

I am writing to you again today because of the significance each questionnaire has to the usefulness of this study. The women from three classes were selected because of the unique perspective each can offer.

In the event you did not receive the questionnaire or have misplaced it, a replacement is enclosed with a self addressed return envelope.

Your cooperation is greatly appreciated.

MAUREEN K. LEBOEUF
LTC, AV
United States Army

Research at The University of Georgia which involves human participants is carried out under the oversight of the Institutional Review Board. Questions or problems regarding your rights as a participant should be addressed to Heidi L. Roof, M.S., or Dr. C. Michael Moriarty; Institutional Review Board; Office of V.P. for Research; The University of Georgia, 604A Graduate Studies Research Center; Athens, Georgia 30602-7411; Telephone (706) 542-6514.

# Appendix G

## Sample Coding

I believe that after a long, stressful day at work or school, the best thing to do is get out and exercise to invigorate the body and revive a "work weary" body. On the flip-side, daily physical exercise will help enhance performance, alertness, and mental/physical toughness on the job.

I know that it is extremely important to maintain at least minimum standards of physical fitness for the purpose of good health. Mentally, it is important to strive for the highest standards for a sense of accomplishment and pride.

believe physical fitness is an essential trait for every rmy officer. Because of my experience in PE at West Point always try to maintain a good personal fitness program n addition to setting an example worth emulating for my oldiers in unit PT sessions [redacted] I still can't do a cartwheel, however.

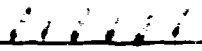
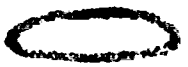
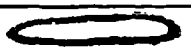
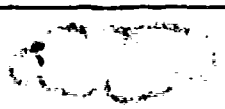
Diet and exercise are key to losing weight (after 3 children and nearly five years of inactivity).

[redacted] I was interested in physical [redacted].

At USMA I became aware of the importance that some people

# Appendix H

Coding Sheet

| COLOR CODE | THEME | QUANTITY |
|---|---|---|
| | Injury | |
|  | Treatment of cadets Negative | |
|  | New skill/attribute | |
|  | Recommendation for change | |
|  | Participation | |
|  | Teach/leading | |
|  | Personal performance | |
|  | Adapting to situation | |
|  | Impression and or credibility | |
|  | PT too important | |
|  | WP-DPE standards too high (Negative) | |
|  | Role model - set example | |
|  | fitness testing | |
|  | WP-DPE standards high (Positive) | |
|  | Benefits of fitness | |
|  | Knowledge | |
|  | Treatment of soldiers - negative | |
|  | Intolerance of poor PT performance by respondent | |
|  | Hate running or other activity because of DPE | |

# Appendix I

## Women Graduates' Recommendations for Change to the Physical Education Curriculum at the United States Military Academy

Table 42

Recommended Changes: Class of 1980

| CATEGORIES | FREQUENCY |
|---|---|
| **KNOWLEDGE** | |
| Nutrition | 7 |
| Physiological differences[1] | 3 |
| Sports Medicine | 2 |
| Stress Management[2] | 2 |
| **LIFETIME SPORTS** | |
| More Emphasis | 10 |
| Ability Groups | 3 |
| **ATTITUDE CHANGE OF DPE INSTRUCTORS** | |
| More Positive | 8 |
| Less Concern about Weight | 3 |
| **ELIMINATE** | |
| Indoor Obstacle Course Test | 3 |
| Running in Boots[3] | 3 |
| Combatives | 2 |
| Peer Ratings in Intramurals | 1 |
| Pull-up Testing | 1 |

[1] Taught in Fundamentals of Physical Fitness.
[2] Taught in War-fighting Fitness.
[3] Has been eliminated.

Table 43

Recommended Changes: Class of 1985

| CATEGORY | FREQUENCY |
|---|---|
| **ADD MASTER FITNESS TRAINER PROGRAM** | |
| Development of Personal Fitness Program[1] | 6 |
| Development of Unit Fitness Program[2] | 5 |
| Make Graduates MFT Qualified[3] | 4 |
| PT Programs for Special Populations (e.g., pregnant, profiles) | 3 |
| Injury Prevention | 2 |
| PT Informative and Fun[2] | 1 |
| NO CHANGES | 17 |
| **MORE FITNESS ACTIVITIES** | |
| Weight Training Program for All Women[1] | 7 |
| More Emphasis on Lifetime Sports | 5 |
| Organized PT during Academic Year | 2 |
| Mental Benefits of Fitness[4] | 1 |
| **ELIMINATE** | |
| Grading (i.e., Make Courses Pass/Fail) | 7 |
| Running in Boots[5] | 3 |
| Clicker Boards | 1 |
| Indoor Obstacle Course Test | 1 |
| **KNOWLEDGE** | |
| Nutrition[1] | 10 |
| Self-exams for Cancer | 1 |
| Stretching[1] | 1 |
| **ATTITUDE OF DPE INSTRUCTORS** | |
| More Positive Attitudes for DPE Instructors | 7 |
| Too Much Emphasis on Weight | 2 |

[1] Taught in Fundamentals of Physical Fitness.
[2] Taught in Master Fitness Core Course.
[3] Class of 1990 first to graduate with Master Fitness Trainer identifier.
[4] Taught in War-fighting Fitness.
[5] Has been eliminated.

Table 44

Recommended Changes: Class of 1990

| CATEGORIES | FREQUENCY |
|---|---|
| **FITNESS** | |
| Organized PT during Academic Year | 8 |
| Aerobic Certification | 4 |
| Mandatory Strength Training for Women[1] | 4 |
| More Electives, Fewer Mandatory Classes | 2 |
| Cadets Administer Own PT Program | 2 |
| More Running at Camp Buckner | 1 |
| **ELIMINATE** | |
| Indoor Obstacle Course Test | 4 |
| Gymnastics | 3 |
| Some Self Defense | 3 |
| **NO CHANGES** | 9 |
| **KNOWLEDGE** | |
| Information for Special Populations (e.g., pregnant, profiles & remedial) | 3 |
| Nutrition | 2 |
| More Info for New Cadets Prior to Entering USMA | 1 |
| Running Techniques for New Cadets | 1 |
| How to Motivate Soldiers[1,2] | 1 |
| **ATTITUDE OF DPE INSTRUCTORS** | |
| DPE Instructors Unapproachable | 5 |
| Too Much Emphasis on Weight | 1 |

[1] Taught in Fundamentals of Physical Fitness.
[2] Taught in Master Fitness Core Course.